

March 2002

Dear DOT Colleagues:

I am pleased to present the U.S. Department of Transportation's fiscal year 2003 Performance Plan combined with the Department's fiscal year 2001 Performance Report.

Our top priorities at DOT are to guarantee the safety and security of the traveling public. We have an enviable transportation safety record in the United States. However, the tragic events of September 11<sup>th</sup> have compelled us to consider transportation security in a new way, in unison with an unrelenting focus on safety. We must constantly seek ways to reduce the inherent risks that transportation poses to the safety of the American people.

Transportation is also vital to improve our national well being, whether measured as economic growth, international competitiveness, or quality of life. However, congestion and delays in transportation burden businesses and individuals with inefficiency and higher costs. We have to continue to find ways to lighten that load.

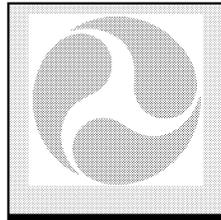
President Bush and I take pride in what the U.S. Department of Transportation plans to achieve in fiscal year 2003 with the resources proposed in the President's Budget. DOT's fiscal year 2003 Performance Plan contains aggressive goals to address our key transportation priorities: increase

transportation safety; protect the homeland; enhance mobility for all Americans; support the Nation's economic growth; and protect the Nation's environment.

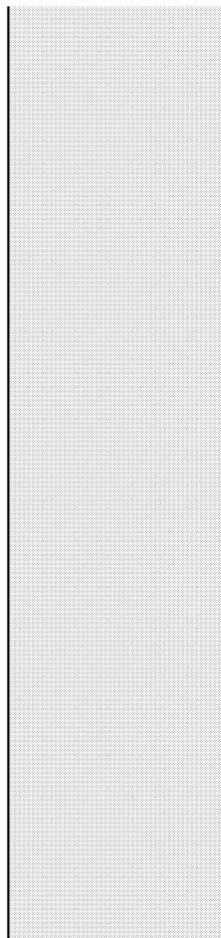
I am also committed to fulfilling the President's management agenda. The primary goals in this plan focus on broad outcomes. Behind each of these outcomes, the DOT operating administrations have developed detailed and output-oriented performance goals and tie those goals to performance accountability agreements. The result: performance goals that match Departmental priorities – especially in resource decisions – and clear lines of accountability for meeting those performance goals.

DOT has made excellent progress towards meeting these priorities. In 2001, the Department met 57 percent of its performance measures. We are committed to improving this level of performance, and to do so, we must constantly search for ways to improve our results.

I look forward to working with you to meet that challenge in the year ahead.



U.S.  
Department  
of  
Transportation



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Management challenges for DOT are identified in the following publications:

*Top Ten Management Challenges*, DOT IG Report, forthcoming, 2002

*Major Management Challenges and Program Risks, DOT*, GAO Report  
GAO-01-253, dated January 2001

*Major Management Challenges and Program Risks, A Governmentwide  
Perspective*, GAO Report GAO-01-241, dated January 2001

*High-Risk Series*, GAO Report GAO-01-263, dated January 2001

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## DOT’s Combined Performance Plan and Report

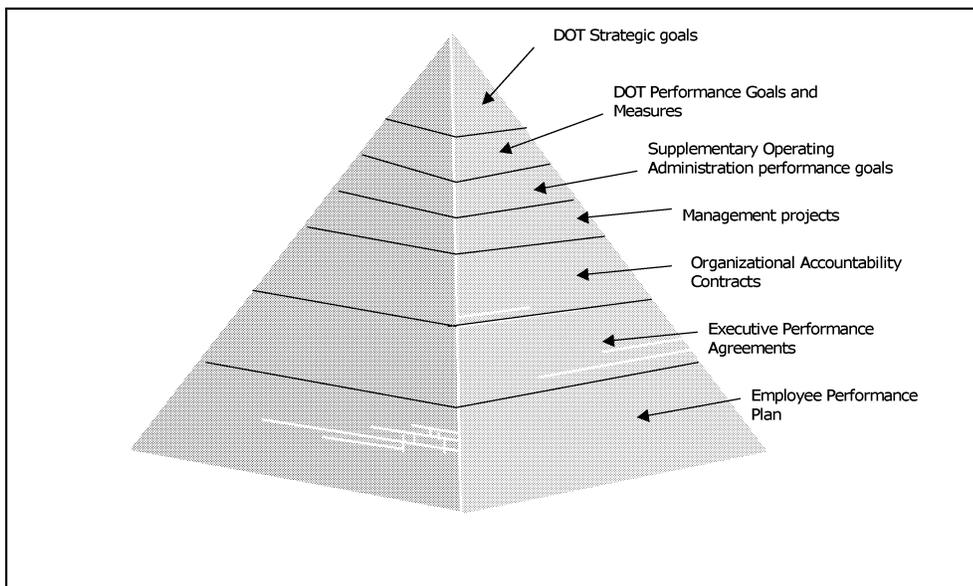
The Department of Transportation (DOT) is committed to embodying the President’s goals of a citizen-centered, results-based, market-oriented government. In this Plan, we outline how DOT will focus more sharply on results by bringing the Department’s energy and resources to bear on improving the Nation’s transportation system. Transportation is a key element in the production of goods and services in the United States; it helps maintain our standard of living, as well as support our Nation’s defense. Everything we do at DOT is aimed at making measurable improvements in our transportation system, the security of our Nation, and the quality of American life.

This is DOT’s fifth annual performance plan, and in it, we set forth for the American public the specific outcomes we intend to achieve for America, along with the resources required to achieve that performance. We will succeed only when we understand historical trends, study recent results, and use this understanding to form the basis for our strategies and resource decisions.

Our FY 2003 Performance Plan supports the planning and reporting framework that is central to our focus on managing the Department’s performance by keeping a clear focus on outcomes we seek and organizational and individual accountability for results:

- The Department of Transportation’s Strategic Plan provides a comprehensive vision for advancing the Nation’s complex and vital transportation system into the 21st Century. For the next several years, it puts forth broad goals; targets specific outcomes we want to achieve, and identifies key challenges.
- The DOT Performance Plan operationalizes the DOT Strategic Plan, and provides strong linkages to DOT’s budget request. The Performance Plan defines those performance goals and measures that will be used to manage our progress toward the achievement of our strategic goals. By closely linking these intended achievements to the budget, it describes in detail one fiscal year’s effort within DOT and shows how this effort fits into the long-range plan for the Department and the U.S. transportation system.
- The DOT Performance Report provides a public accounting of performance against the goals in the FY 2001 plan.
- Accountability agreements, for DOT organizations, executives, and employees embed the philosophy of managing for performance into the Department’s culture and daily practices.

This graphic describes how DOT will move from planning, measuring, and reporting on performance, to managing performance:



## The DOT Strategic Plan

The DOT Strategic Plan sets forth the overall direction, vision, and mission of the Department. The Strategic Plan covering this Performance Plan is dated July 2000 and covers the years 2000 through 2005. In that plan, citing the Department's enabling legislation from 1966, the purpose of the Department is described:

*"The national objectives of general welfare, economic growth and stability, and security of the United States require the development of transportation policies and programs that contribute to providing fast, safe, efficient, and convenient transportation at the lowest cost consistent with those and other national objectives, including the efficient use and conservation of the resources of the United States."*

The Strategic Plan provides a mission statement to describe the underlying purpose for Departmental activities, identifies five Strategic Goals that capture the most important outcomes influenced by the Department's programs, and one Organizational Excellence Goal, describing how DOT intends to put the President's Management Agenda into effect in this Cabinet department:

### VISION

"A visionary and vigilant Department of Transportation leading the way to transportation excellence and innovation in the 21st Century."

### MISSION

"Serve the United States by ensuring a safe transportation system that furthers our vital national interests and enhances the quality of life of the American people."

### STRATEGIC GOALS

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

**Mobility** - Shape an accessible, affordable, reliable transportation system for all people, goods, and regions.

**Economic Growth** – Support a transportation system that sustains America's economic growth.

**Human and Natural Environment** - Protect and enhance communities and the natural environment affected by transportation.

**National Security** - Ensure the security of the transportation system for the movement of people and goods, and support the National Security Strategy.

### ORGANIZATIONAL EXCELLENCE GOAL

Advance the Department's ability to manage for results and innovation.

## How We're Organized

DOT employs more than 118,000 civilian and military people across the country, in the Office of the Secretary of Transportation (OST) and through twelve operating administrations and bureaus, each with its own management and organizational structure:

Federal Aviation Administration	National Highway Traffic Safety Administration
Federal Highway Administration	Research and Special Programs Administration
Federal Motor Carrier Safety Administration	St. Lawrence Seaway Development Corporation
Federal Railroad Administration	Transportation Security Administration
Federal Transit Administration	United States Coast Guard
Maritime Administration	Bureau of Transportation Statistics

The Office of the Secretary of Transportation provides overall leadership and management direction, and administers aviation economic programs. The Transportation Administrative Service Center provides administrative support. The Office of Inspector General (OIG) and the Surface Transportation Board (STB), while formally a part of DOT, are decisionally independent by law and are not part of this plan.

## How We Select Our Performance Goals and Measures

Performance *goals* articulated in the introductory paragraph of a goal page in the DOT Plan are aimed at achieving one or more strategic outcomes, and convey a sense of how DOT creates value for the American public. Performance measures, however, are aimed at tangible effects created by DOT program activities.

We have tailored performance measures to how DOT gets our work done for each performance goal. When considered along with external factors and information provided in program evaluations, these measurements give valuable insight into the performance of DOT programs. These measures, and the discussion of means and strategies under each, are meant to broadly illustrate how DOT adds value to the nation, and thus do not represent an exhaustive treatment of every activity and performance indicator in the Department. This Performance Plan is a top-level, integrated depiction of managing for results within DOT, presenting a picture of the entire Department, and is not an exhaustive treatment of all DOT programs and activities. Therefore, it should be read in conjunction with the individual operating administrations' budget justifications, which provide more detailed discussion of program-specific performance and resources.

**Terminology** - We will use the following terminology throughout the plan and report:

Strategic Goal – statement from the DOT Strategic Plan, outlining the desired long-term end state.

Strategic Outcome – statement from the DOT Strategic Plan, outlining nearer-term objectives.

Performance Goal – a performance objective, connecting effects created by Departmental activities and programs, and the resulting influence on strategic outcomes.

Performance Measure - a measurable indicator of progress toward a performance goal, with annual targets.

## How We Will Achieve Our Strategic and Organizational Goals

The Department will achieve its goals through its leadership role in U.S. transportation policy, operations, investment, and research. To influence results, DOT programs rely on a number of common interventions and actions. These include:

- ▶ *Direct operations and investment in DOT capital assets that provide capability*, such as air traffic control, airline passenger security screening, and Coast Guard's vessel traffic services, maritime search and rescue, and military operations.

- ▶ *Infrastructure investments and other grants*, such as investment in highway, rail, transit, airport, and Amtrak capital infrastructure improvement, and grants for safety, job access, or other important transportation programs.
- ▶ *Innovative financial tools and credit programs*, such as those provided for by the Transportation Infrastructure Finance and Innovation Act, and the Railroad Rehabilitation and Improvement Financing Program.
- ▶ *Rulemaking*, in areas such as equipment, vehicle or operator standards; for improving safety; and for fostering competition in the transportation sector of the U.S. economy.
- ▶ *Enforcement* to ensure compliance, including inspections, investigations, and penalty action.
- ▶ *Technology development and application*, such as fostering new materials and technologies in transportation, and transportation related research.
- ▶ *Education*, such as consumer awareness, and campaigns to influence personal behavior.
- ▶ *Public Information*, such as that provided by the Bureau of Transportation statistics, and each DOT operating administration, so that states, localities, regions, and private sector entities can better plan their activities.

Some of these interventions and actions reside entirely within the Federal Government, but most involve significant partnering with state and local authorities and with the transportation industry. These are the broad areas of action that DOT – and state and local governments – commonly use to bring about desired results. Tax expenditures are also a significant tool by which the Federal Government encourages transportation investment, but do not represent a key tool of intervention by DOT.

This combined Performance Plan and Report focuses on DOT's five strategic goal areas, the results we saw in 2001, and the FY 2003 resources and activities that will help us achieve results. At the same time, some activities are internal ones – like financial management, procurement, and personnel -- without which the Department could not operate or hope to achieve its goals. The Organization Excellence chapter of this plan focuses on overall DOT efforts to achieve our part of the President's management agenda, ensuring that we are a citizen-centered, results-oriented, Cabinet agency, depending on market-based transportation solutions.

## How We Have Structured Our 2003 Plan and 2001 Report

For each strategic and organizational goal, we present the key performance goals we will use in FY 2003 to guide our activities and judge our results, along with the measures in our 2001 Performance Plan and our performance against them. In some cases, where a performance goal has been redirected to an operating administration’s performance plan, we provide a report on past performance. For each performance goal we provide:

Component	Integral to Performance Planning	Integral to Performance Reporting
• A description of the challenge we face – the reason for action	✓	✓
• The measure or measures we are using to judge success, and the FY 1999-2003 targets for each	✓	✓
• The external factors that may present special challenges in achieving our goal	✓	✓
• A discussion of other agencies who share in our efforts, or whose outcome goals we contribute to.	✓	✓
• FY 2003 activities, resources, and any significant legislation or regulations we propose	✓	
• Special management challenges (when related to goal)	✓	✓

An assessment of the completeness and reliability of our performance data, an explanation of how we verify and validate our measurements, and detailed information on the source, scope and data limitations for the performance data in this plan and report are provided in Appendix I. In that appendix, we also provide information on our plans to resolve the inadequacies that exist in our performance data.

## Our 2001 Results: A Reader’s Guide

DOT has measured and assessed performance in various programs for some time, and this is our third year of presenting a top-level look at outcomes across the entire Department. To present information meaningfully, we have relied on these general rules about data and data interpretation in preparing this report:

The Relationship between DOT’s Activities and Observed Results: The relationship between resources and results can be complex. Results of direct service programs, such as Coast Guard migrant interdiction, are significantly influenced by current-year activities, and by external forces. Other results, such as highway congestion or transit ridership, are predominately influenced by prior-year funding. Almost all results are influenced by a mix of current and prior-year activity. Performance trends and current- year outcomes should be viewed with this understanding.

Fiscal Year versus Calendar Year: Again for FY 2001, most DOT results are reported on a fiscal year basis, but some are reported on a calendar year basis. Many DOT safety programs report results by calendar year, because data capture and reporting by States has long been accomplished on that basis. We have been careful to note the calendar or fiscal year basis of result and trend measurement. Either is a satisfactory basis for measuring DOT’s annual performance.

## **Data Completeness**

Preliminary vs. Final Results: Reporting 2001 results by March 2002 has been challenging where we rely on third-party reporting. Often we have only preliminary or estimated results based on partial-year data and must wait for final data to properly verify and validate our results. In some cases where data is provided solely as an annual value and is not available in time for this report, we rely on historical trend information and program expertise to generate a projected result. We have been careful to point out where we have assessed our performance on a preliminary or projected basis. Preliminary estimates or projected results provide reasonable, quantitative assessments of our performance, but the reader should expect them to be adjusted after final compilation or verification and validation. In all cases where results have changed from last year's report, we indicate that by placing an "(r)" with the number, indicating a revision. Where significant differences exist in the actual result from the preliminary estimate or projection in last year's performance report, we discuss 2000 and 2001 results – displaying final results where preliminary measurements existed in our FY 2000 report, and preliminary or estimated results for FY 2001. Results that are final are not expected to need significant revision.

Single Year Results vs. Historical Trends: Federal and State programs rarely aim to influence simple things. We tackle complex national problems such as safety, pollution, and congestion. Sometimes we see progress overwhelmed by external factors, such as economic growth (or recession), market shifts, extreme weather, and other factors. Sometimes we get a "helping hand" from those same factors. In most outcomes there is natural fluctuation year to year – one can see it clearly in the ten-year trend lines.

DOT sets annual performance targets for the outcomes it aims to influence, regardless of these factors. Targets set a mark so we can judge our progress. They also force us to think hard about what we can – and can't – do to get results. In this report, we focus on single-year results for 2001. There is no simple formula that ties the results in one year to the success or failure of programs. DOT's 2001 Performance Report invites the reader to "look over our shoulder" at the real-world picture we are studying as we try to make transportation and the lives of Americans better.

Performance Progress Report: To help interpret single year results and historical trends, we have provided a Performance Progress Report at the front of each strategic goal section. These tables provide data from 1995-2001 and DOT's 2001 target. Judging good trends is sometimes difficult, and for this reason, we provide time-series data in graphic form on each goal page. Readers should view our 2001 results with an eye both to attainment of the performance target and to the long-term trend.

## **Our 2003 Plan: A Reader's Guide**

Fiscal Year 2003 marks our fifth DOT Performance Plan. This year's product builds on the suggestions of the General Accounting Office, DOT's Inspector General, and other stakeholders plus what we have learned within our own programs. But foremost, this Plan takes to heart the President's charge to DOT to become more results-based by focusing more closely on the relationship between DOT missions, programs, and resources. We have combined many performance goals that were formerly displayed in a more fragmented fashion. Collapsing similar goals provides the reader with a better sense of how different organizations, programs, and activities interact to achieve progress toward high level, difficult-to-achieve performance goals. Each chapter introduction will provide a 'roadmap' indicating how performance goals have either been combined in the DOT Plan, or will be eventually reported on in combination with performance goals moved to DOT operating administrations' performance plans. Again, several broad principles have guided us in presenting our performance plan:

Setting Annual Performance Targets: DOT's targets for 2003 reflect the gains we think we can make in each goal area. There's no exact science to calibrating "targets" to resources. The goals we've set reflect a combination of current funding, past funding, program initiatives, and the actions of our partners. There is also an element of "stretch" – and realism in our goals. In the end we intend to move results in the right direction.

## Data reliability

How We Have Improved Some Measures: This is our fifth year of performance planning – and of verification and validation. In a number of cases we have found better ways to define the measure or compile the data, creating a more sensitive and realistic indicator. In some cases we have developed entirely new measures. We will continue to improve measures where we think it will improve our management and our accountability.

Integrating FY 2003 Resources With Achievement of Our Goals: A fundamental strength of DOT programs is that existing capacity delivers public value in multiple goal areas. By design, a dollar spent on transportation infrastructure may also advance safety, homeland security, mobility, economic growth, and the mitigation of harmful environmental impacts. We again have included graphs or tables attributing budgetary resources to performance goals in each performance goal page. In this fashion, we have made the linkage of resources to performance goals more clear. Appendix II shows this information by strategic goal in summary form. We have proposed to restructure the FAA's Facilities and Equipment, and Research, Engineering, and Development accounts – moving from an activity-based, to a performance-based structure. This new structure provides a clearer linkage between resources and the performance.

### Management Challenges:

The DOT Inspector General and the General Accounting Office have published reports describing a number of problems and challenges facing the Department. We take these issues seriously, and have folded our approach to meeting these challenges into our general efforts to achieve the outcomes we seek for the Nation. In general, where there is a DOT performance goal associated with a specific management challenge, we have included a discussion of the challenge on that goal page, and made it stand out visually by use of a text box, as shown in the example to the right. We also indicate where a Management Challenge relates to more than one performance goal.

#### ***Special Focus: Management Challenges***

Our performance measures and results are the focus of this combined plan and report. Transportation outcomes are what we aim for, every day. But how we achieve these results is also vitally important. The public entrusts us not only to improve transportation safety and performance, but also to manage our resources and programs wisely. Throughout this plan and report we identify the key management challenges we must address and overcome as we work towards meeting specific performance goals.

### DOT Contributions to Common Governmental Outcomes:

DOT's performance is aligned with its legislative mandates, but in some cases there are no "bright lines" separating DOT from other Executive Branch agencies.

For instance, in DOT's National Security Strategic goal, we make very important contributions in accordance with our mandates and appropriations, but we are hardly alone in that regard. We contribute to the national security alongside such Departments as Defense, State, Justice, Commerce, and Energy. Similarly, other agencies, operating within their separate mandates and resource levels, make significant contributions to the nation's transportation system such as the Departments of Defense and Commerce, and the National Aeronautics and Space Administration.

## Revisions to Our 2002 Plan:

Every Fall, DOT revises its annual performance plan based on Congress' action on the President's annual budget request, and to improve measures or targets based on additional performance information. This year, in order to align last year's plan to the more systematic and focused array of performance goals in this year's Plan, we have chosen to display revisions to last year's plan in this document, rather than publishing them separately. Several goals in the plan have been redirected to DOT's operating administrations as supplementary goals (as indicated in the affected goal pages) to reflect a more concentrated DOT programmatic focus in FY 2002. While operating administration 2002 performance targets are displayed in the supplementary measures redirected to operating administration's performance plans, (with their results to be discussed in next year's explanation of DOT program performance) they will not be formally reported on in next year's Performance Report. However, data from DOT operating administration's performance

goals and measures will be cited to enhance the reader's understanding of the Department's performance. Last, the Plan's Organizational Excellence chapter has been rewritten to reflect the priorities in the President's Management Agenda published last August.

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## Performance Goals - Safety

<b><u>Performance Goal</u></b>	<b><u>Page</u></b>	<b><u>Data Details</u></b>
<b><u>Reduce Fatalities and Injuries</u></b>		
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## STRATEGIC GOAL: SAFETY

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

### **W**e 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.]

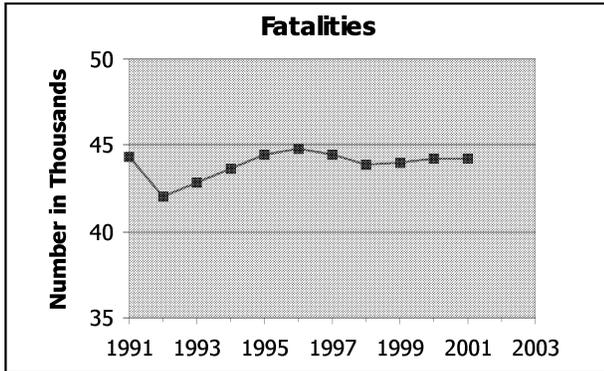
##### Transit Safety

##### Pipeline Safety

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

##### Hazardous Materials Safety

## Overall Transportation Safety

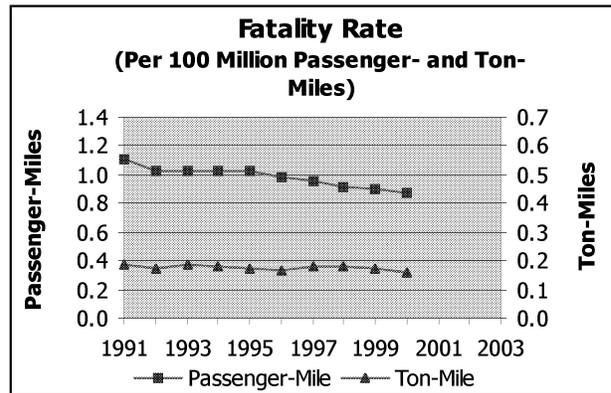


### Fatalities:

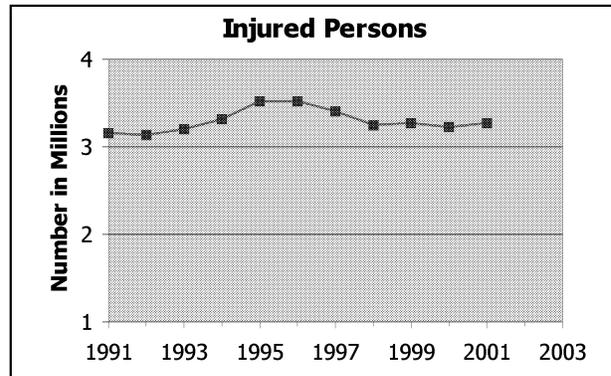
After several years of decline, the overall number of transportation fatalities grew from 1992 to 1996, then trended downward through 1998. Based on projections from preliminary data for 2000, transportation fatalities rose slightly from 2000 (44,164) to 44,208. (Preliminary estimates for 2001 are available 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.



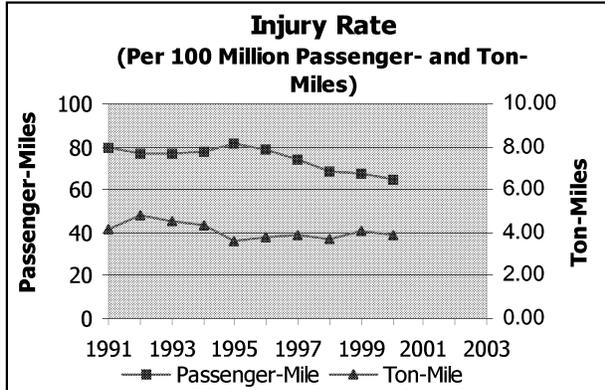
The fatality rate per ton-mile of freight has followed a similar pattern, and again decreased in 2000. This decrease also meets the strategic outcome goal of reducing the rate of transportation-related fatalities, in this instance measured per ton-miles.



### 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

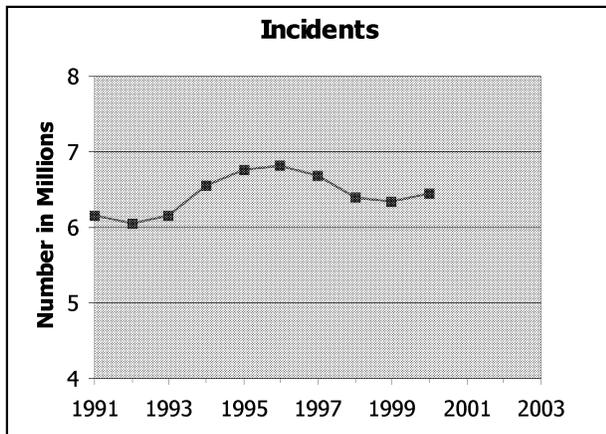
strategic outcome goal of reducing the number of transportation-related injuries. Again, this was a particular challenge given the fairly steady rise in travel.



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 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.



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.

## 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:**

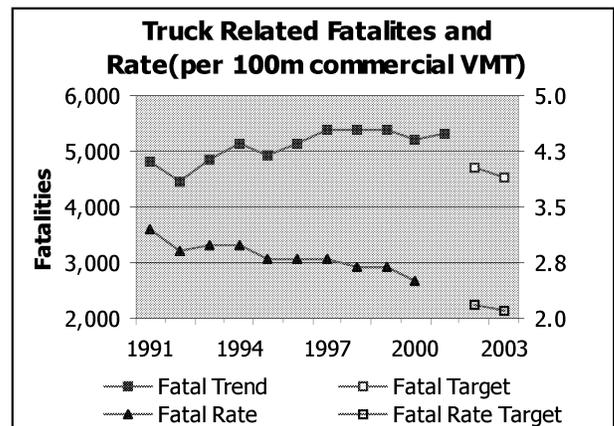
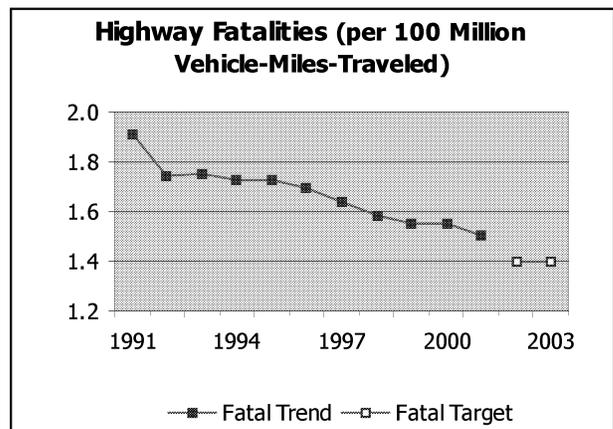
**Performance measures:**

Fatalities per 100 million vehicle-miles of travel (VMT).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	1.6	1.5	1.5	1.4	1.4
<b>Actual:</b>	1.6	1.5(r)	1.5#		

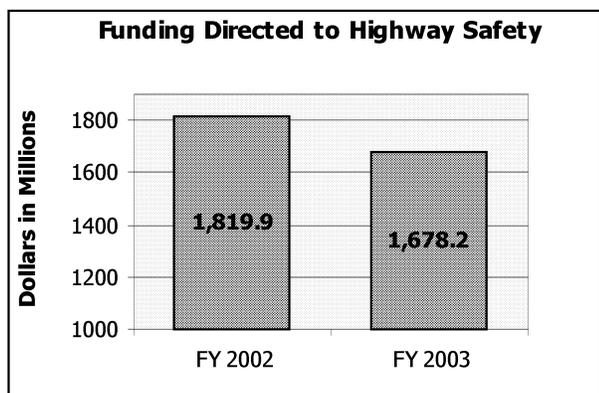
Number and rate (per 100 million commercial VMT) of fatalities in crashes involving large trucks.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>					
Number:	N/A	4,934	4,830	4,710	4,540
Rate:	N/A	N/A	N/A	2.2	2.1
<b>Actual:</b>					
Number:	5,380	5,211(r)	5,307#		
Rate:	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 feature 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.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	127	116	113	111	*
<b>Actual:</b>	120	116(r)	116#		

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

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

Percentage of highway fatalities that are alcohol-related.

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

Percentage of front occupants using seat belts.

	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	80%	85%	86%	87%	*
<b>Actual:</b>	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.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	.048	.045	.043	.038	.033
<b>Actual:</b>	.059	.033	.017#		
3-year average:	.051	.037	.037#		
# Preliminary estimate					

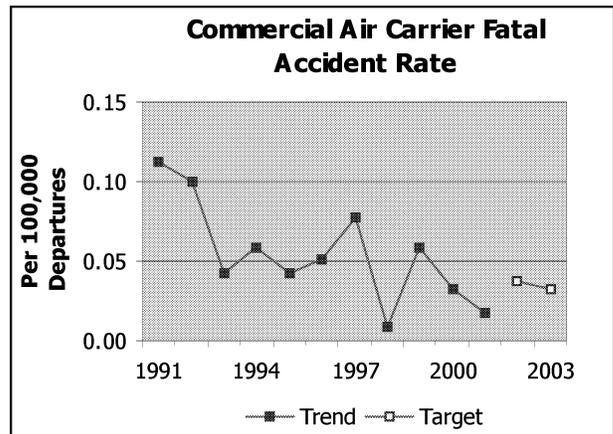
Number of fatal general aviation accidents.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	379	379	379	374
<b>Actual:</b>	364	341(r)	357		
(r) Revised.					

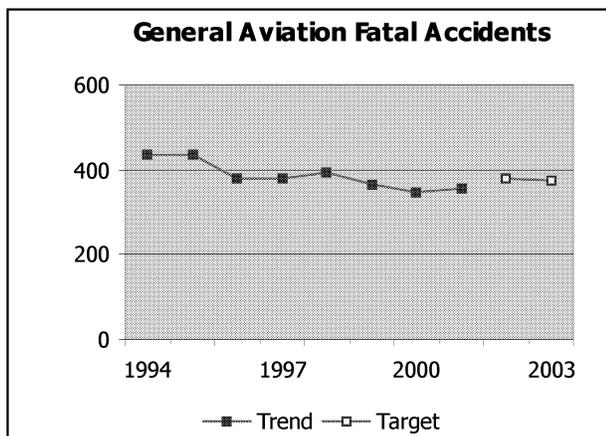
**Note on data:** Since the 1970's NTSB has not include fatal crashes caused by criminal or terrorist actions in calculating the commercial fatal accident rate, and DOT follows NTSB methodology in quantifying our performance in commercial aviation safety. Therefore, the commercial fatal accident rate 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.

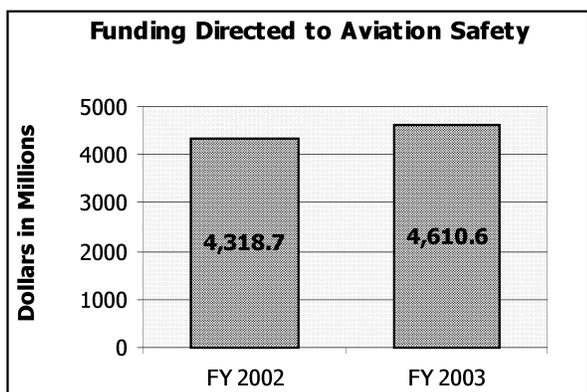
General aviation (GA) aircraft range from single-seat home-built aircraft to rotary wing craft, balloons, and extended-range turbojets. Levels of risk are highly variable within this aviation segment, and regulatory oversight varies considerably. Some elements of general aviation operate in hazardous 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.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	4.96	4.86	5	*	*
<b>Actual:</b>	5.7	6.83(r)	7		

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

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

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

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

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

	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>					
Number:	N/A	N/A	N/A	53	*
Rate:	N/A	N/A	N/A	.08	*
<b>Actual:</b>					
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:**

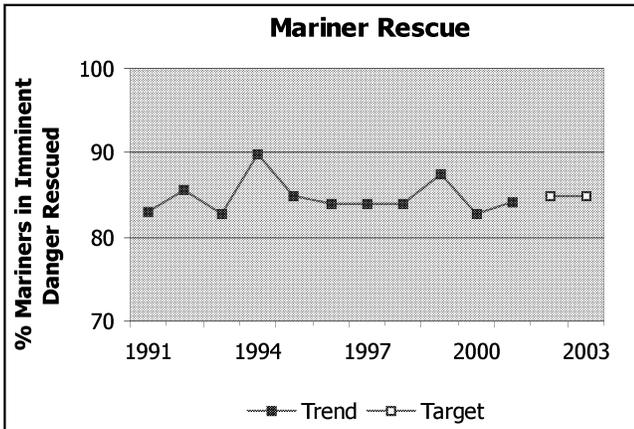
Reduce the number of fatalities at sea by minimizing risks for passengers and crew and by responding to distress calls by those in danger.

**Performance Plan:**

**Performance measure:**

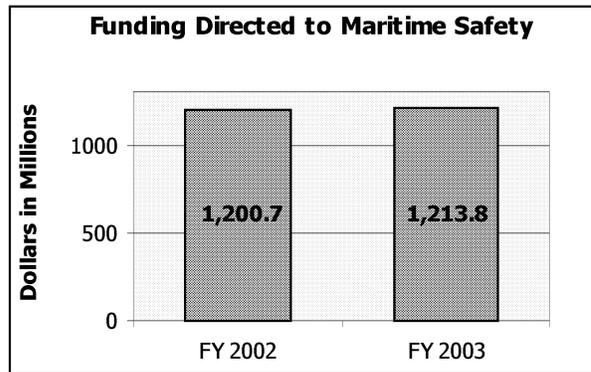
Percent of all mariners in imminent danger who are rescued.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	85%	85%	85%
<b>Actual:</b>	87.5%	82.7%	84.2%		

**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).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	763	763	749	742	*
<b>Actual:</b>	778	742	742#		

Fatalities and rate (per million passenger capacity) aboard passenger vessels.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>					
Number:	N/A	N/A	22	N/A	*
Rate:	N/A	N/A	N/A	2.5	*
<b>Actual:</b>					
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.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	2.19	1.57	1.39	1.39	1.30
<b>Actual:</b>	1.83	1.75(r)	1.69#		

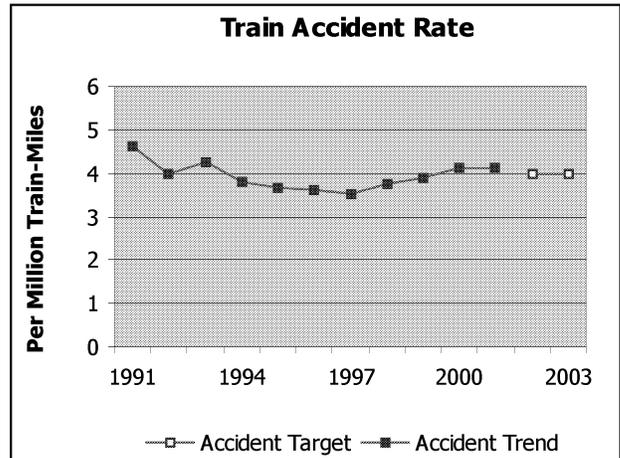
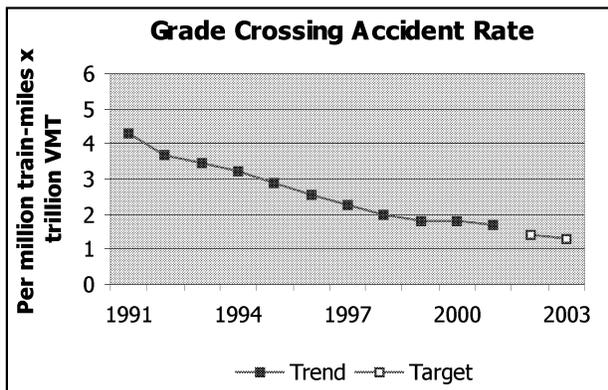
Train accidents per million train-miles.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	3.44	3.44	3.35	4.00	4.00
<b>Actual:</b>	3.89	4.13	4.11		

(r) Revised; # Preliminary estimate.

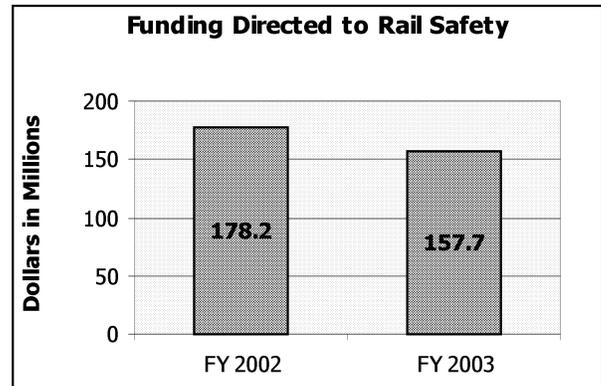
**Note on data:** Because trespassing occurs on private property, it is always difficult for FRA to have more than marginal success in reducing the number of trespassing fatalities. Trespasser fatalities account for almost half of total rail-related fatalities, so DOT will use the train accident rate 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.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	1.57	1.30	1.23	1.20	*
<b>Actual:</b>	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:**

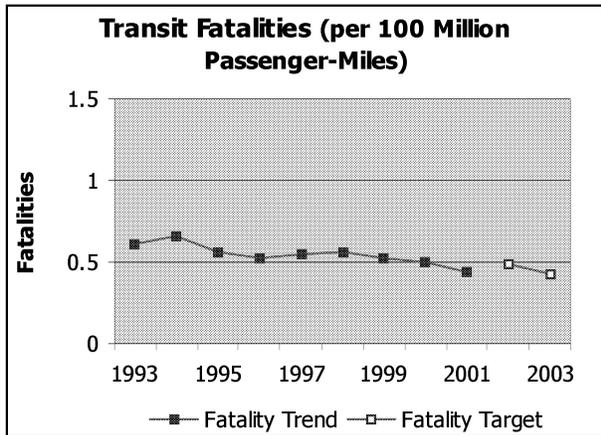
**Performance measures:**

Transit fatalities per 100 million passenger-miles traveled.

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

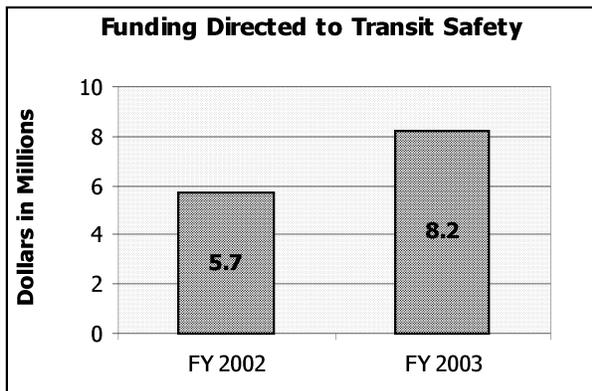
(r) Revised.

**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, industrial 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.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	123.2	121.9	120.7	109.4	*
<b>Actual:</b>	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.

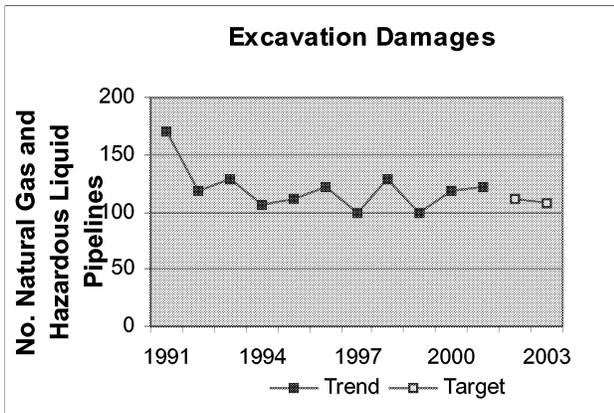
**Performance Plan:**

**Performance measure:**

Number of excavation damages to natural gas and hazardous liquid pipelines.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	111	107
<b>Actual:</b>	100	119	121		

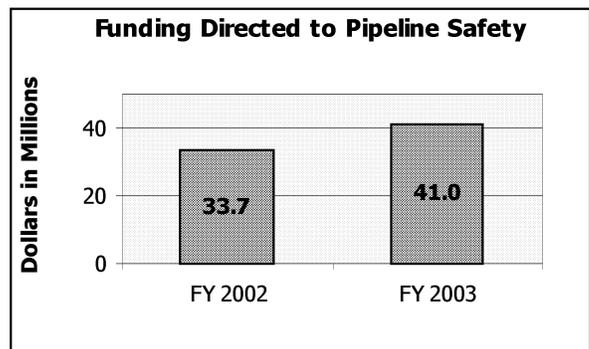
**Note on Data:** DOT is changing this performance measure from covering failures from any cause for only natural gas transmission pipelines to excavation damages for all pipelines, since that is the predominant failure mode for all pipelines, and the failure mode most associated with pipeline related 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.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	4,528	4,451	4,375	4,301	*
<b>Actual:</b>	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.

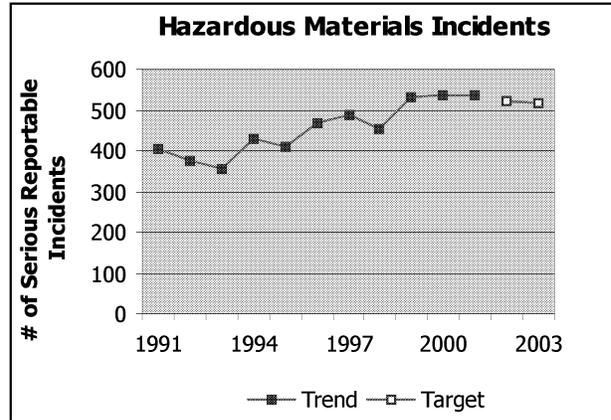
**Performance Plan:**

**Performance measure:**

Number of serious hazardous materials incidents in transportation.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>					
Original:	430	411	401	391	N/A
Revised:	N/A	N/A	N/A	523	515
<b>Actual:</b>					
Original:	377	494(r)	367#		
Revised:	532(r)	539(r)	538#		

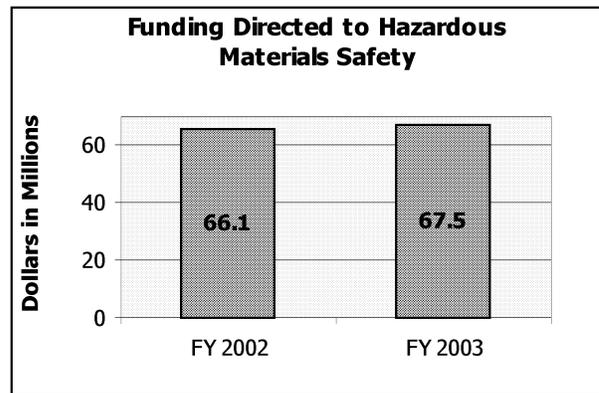
(r) Revised; # Preliminary estimate

**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.

## Performance Goals - Homeland Security

<b><u>Performance Goal</u></b>	<b><u>Page</u></b>	<b><u>Data Details</u></b>
<b><u>Reduce Vulnerability to Crime and Terrorism &amp; Promote Regional Stability</u></b>		
Aviation Security .....	41	141
Coastal and Seaport Security .....	43	142
<b><u>Increase National Defense Capability</u></b>		
Strategic Mobility .....	47	143
<b><u>Reduce Flow of Drugs and Migrants, and Reduce Illegal Border Incursions</u></b>		
Drug and Migrant Interdiction.....	50	147
<b><u>Report on Discontinued Performance Goal</u></b>		
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## STRATEGIC GOAL: HOMELAND SECURITY

***Ensure the security of the transportation system for the movement of people and goods, and support the National Security Strategy.***

### **W**e Aim To Achieve These Strategic Outcomes:

- Reduce the vulnerability of the transportation system and its users to crime and terrorism.
- Increase the capability of the transportation system to meet national defense needs.
- Reduce the flow of illegal drugs entering the United States.
- Reduce the flow of migrants illegally entering the United States.
- Reduce illegal incursions into our sovereign territory.
- Increase support for United States interests in promoting regional stability.
- Reduce transportation-related dependence on foreign fuel supplies.

#### **Performance Goals**

Reduce Vulnerability to Crime and Terrorism and Promote Regional Stability  
Aviation Security

Coastal and Seaport Security

[With DOD readiness for operation goal in USCG Performance Plan.]

Increase National Defense Capability

Strategic Mobility

Reduce Flow of Drugs and Migrants, and Reduce Illegal Border Incursions

Drug and Migrant Interdiction

[With cocaine seizure rate goal in USCG Performance Plan.]

Transportation security is equal in importance to transportation safety. As we have witnessed, the Nation's transportation system has certain vulnerabilities, which need to be guarded against attack, and our borders are subject to illegal intrusions by smugglers of contraband or weapons of mass destruction, and by illegal migrants. DOT's objective is to contribute to homeland security by minimizing the vulnerability of our transportation system to disruption, damage, or exploitation through crime or terrorism.

The FY 2003 budget proposes \$8.7 billion to accelerate the Department's progress in achieving these outcomes.

A summary performance report and a detailed analysis of our 2003 strategies follow.

**PERFORMANCE REPORT: HOMELAND SECURITY**

	1995	1996	1997	1998	1999	2000	2001	2001 Target	Met	Not Met
Percent of those who need to act who receive threat information within 24 hours	N/A	N/A	N/A	N/A	N/P	N/P	N/P	N/P		✓
Percent of days maintain combat readiness rating of 2 or better for the designated number of critical defense assets	N/A	N/A	N/A	N/A	4^	51	67*	100		✓
Percent RRF no-notice activations that meet assigned readiness timelines	100	100	94	100	100	100	100	100	✓	
Percent of days that RRF ships are mission-capable while under DOD control	N/A	99.2	95.2	98.8	98.4	97.0	99.3	99.0	✓	
Percent of total mariners available to crew	N/A	N/A	N/A	N/A	122(r)	117	120	100	✓	
Percent DOD-designated primary or alternate port facilities available when requested by DOD	71	64	57	93	93	93	92	93		✓
Percent seizure rate for cocaine shipped through the transit zone	6.1	5.3	16.3	10.1	12.2	10.6	11.1**	15		✓
Success rate for undocumented migrants attempting to enter the U.S. over maritime routes	25.1	8.5	5.6	8.9	13.3	11.0	17.5	13		✓
Transportation-related petroleum consumption (in quadrillion BTUs) per trillion dollars of Real GDP in 1996 constant dollars	3.075	3.037	2.945	2.900	2.851	2.882(r)	2.783#	2.76***		✓
Ship capacity (in thousands of twenty-foot container equivalent units, or TEUs) available to meet DOD's requirements+	N/A	N/A	124	161	162	171	168	165	✓	
Detection rate for explosives and weapons that may be brought aboard aircraft	NP	NP	NP	NP	NP	NP	NP	NP		✓

N/A = Not Available

NP = Not published (Sensitive information protected under 14 CFR Part 191)

\* Reflects data for the first ¾ of the year only; the last quarter is not available due to the 9/11 attack on the Pentagon

\*\* Preliminary estimate

# Projection

\*\*\* Equivalent to previous target

^ FY 1999 used different reporting criteria than FY 2000 and 2001 (wartime personnel allowance vs. peacetime personnel allowance). Therefore, comparisons may be misleading.

+ Shipping capacity is based on the total capacity of the Maritime Security Program and the Voluntary Intermodal Sealift Agreement programs.

**AVIATION SECURITY:** The United States and its citizens remain targets for terrorist groups seeking to challenge or influence international affairs. Thus, protecting air travelers against terrorist and other criminal acts is a national security priority. After the terrorist attacks of September 11<sup>th</sup>, 2001, the President signed the Aviation and Transportation Security Act (P.L. 107-71). That act established the Transportation Security Administration. The Department’s goals clearly reflect this new responsibility. Public confidence in the safety and security of air travel enables its continued growth - tourism and world economies depend upon effective aviation security measures being efficiently applied. Governments, airlines and airports must work together cooperatively to achieve our common goal: safe and secure air transportation worldwide.

**Performance Goals:**

Ensure that no terrorist or other individual is successful in causing harm or significant disruption to the aviation system.

Reduce passenger waiting time at screening checkpoints to no more than ten minutes, 95 percent of the time.

**Performance Plan:**

**Performance measures\*:**

By November 19, 2002:

- By Nov. 19, 2002, meet legislative requirement to have passenger security screening at 424 airports accomplished by Federal employees; and establish Federal control of passenger screening at five additional airports; and
- By Dec. 31, 2002, meet legislative requirement to have all checked baggage at 429 airports screened by explosive detection technology.

[Passenger and baggage screening effectiveness measure – data is being developed by TSA.]

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	*	*
<b>Actual:</b>	-	-	-		

Average waiting time in minutes for passengers in line for screening.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	N/A	*
<b>Actual:</b>	N/A	N/A	N/A		

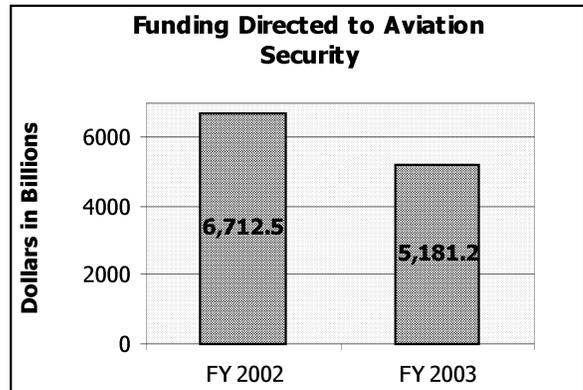
\* TSA is developing long-term performance measures for aviation security and screening efficiency.

**External Factors:** Airport security measures as well as the speed of processing passengers and baggage through screening checkpoints must

keep pace with the long-term growth trend in passengers and cargo, both international and domestic. Airport and airline operations at airports often feed sudden surges of passengers and baggage through security screening, creating “shock loads” for the screening process.

**Strategies and Initiatives to Achieve 2003**

**Target:** DOT resources attributable to this performance goal are depicted below:



The Aviation and Transportation Security Act set up a variety of aviation security measures and deadlines, which DOT is working hard to meet. The Under Secretary of Transportation for Security will forward a report to the Congress in accordance with Section 130 of the Act, outlining the short-term aviation security goals of the Department. When the DOT FY 2003 Performance Plan is revised this fall subsequent to Congressional action on the President’s FY 2003 budget, DOT intends to establish a performance target for passenger and cargo screening effectiveness and efficiency. TSA is gathering data for that purpose now. In addition, TSA is:

- adding to its intelligence workforce to keep abreast of the evolving terrorism threat from potential chemical, biological, or surface-to-air attacks against the civil aviation system and possible disruptions of the National Airspace System information systems and infrastructure.
- purchasing and deploying advanced security equipment for use at airports across the Nation. This will include newly developed, smaller, less expensive explosives detection systems (EDS) for checked baggage that will be more suitable for less busy airports and air carrier stations.
- improving technology for detecting explosive devices and weapons to decrease the vulnerability of airports and aircraft to security threats.

**Other Federal Programs with Common Outcomes:** Aviation security is part of the Homeland Security Strategy. TSA works closely with the Office of Homeland Security, Federal Bureau of Investigation, Central Intelligence Agency, and the State Department. TSA conducts joint airport vulnerability assessments with the FBI, and works with the U.S. Customs Service and the U.S. Postal Service to improve security for cargo and mail air shipment. TSA also works with the Bureau of Alcohol, Tobacco, and Firearms to improve the use of canines for explosives detection.

**Performance Report:**

**Discontinued performance measure:**

Detection rate for explosives and weapons that may be brought aboard aircraft.

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	##	##	##	*	*
<b>Actual:</b>	##	##	##		

## Detection rates are sensitive information protected under 14 CFR Part 191. Baseline data and targeted increases will be made available to appropriate parties upon request.

\* Performance measure is discontinued after 2001, since TSA is developing a more comprehensive set of performance measures that will better define how effectively DOT performs its aviation security mission.

**2001 Results:** DOT did not meet the performance target. As the events of 9/11 made clear, DOT neither possessed nor distributed information sufficient to thwart the nineteen terrorists in their plan to attack New York City and Washington, DC. Reflecting the fact that DOT and FAA take seriously its aviation safety and security missions, the FAA Administrator withheld all executive bonuses in FAA for 2001.

**FY 2002 Performance Plan Evaluation:** DOT expects to meet the performance target for standing up TSA.

**Management Challenge – Aviation and Transportation Security (IG/GAO)**

The IG and GAO have previously noted that challenges exist in effectively meeting national requirements for improving security in aviation and surface transportation. After the terrorist attacks last September, Congress passed and the President signed the Aviation and Transportation Security Act, which created an Under Secretary of Transportation for Security, and a new DOT operating administration - the Transportation Security Administration.

The Department is focused on rapidly standing up TSA and improving aviation security, while attending to security issues beyond aviation. The IG has pointed out that much needs to be done in defining and implementing TSA’s statutory role in all aspects of transportation security, in addition to the immediate tasks at hand presented by meeting all statutory deadlines in Federalizing aviation security.

This goal page and the following discussion in the Critical Transportation Infrastructure Protection page in their entirety address the challenges laid out by the GAO and the IG.

**COASTAL AND SEAPORT SECURITY:** The Department, through the Transportation Security Administration and the U.S. Coast Guard – provides an essential element of homeland security. DOT’s homeland security functions are anchored in coordinated interagency law enforcement, coastal sea control, and port security and defense.

**Performance Goal:**

Ensure sea-borne foreign and domestic trade routes and seaports remain available for the movement of passengers and cargo.

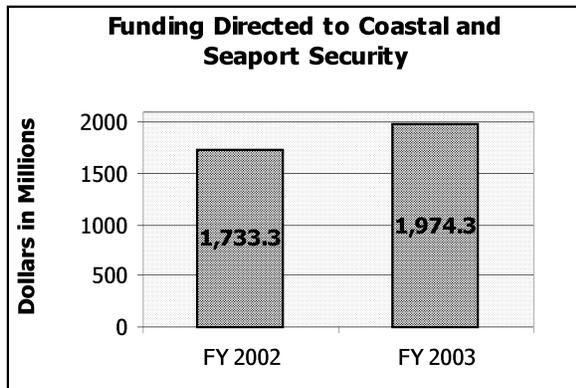
**Performance Plan:**

**Performance measure:**

Percent of high interest vessels screened.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	N/A	100%	100%
<b>Actual:</b>	N/A	N/A	N/A		

**Strategies and Initiatives to Achieve 2003**

**Target:** DOT resources attributable to this performance goal are depicted below:



This is a new performance goal and measure in 2002. DOT is working to improve security in the nation’s ports, waterways and maritime borders. To achieve this goal, TSA, Coast Guard, and MARAD will jointly focus on the following strategies:

Domain Awareness. The Coast Guard will increase intelligence efforts in ports; improve advanced information on passengers, crew and cargo; and establish or improve information and intelligence fusion centers in Washington and on both coasts. Doing so requires significant improvements in DOT’s communications and connectivity to enhance receipt, analysis, and dissemination of information to operational forces and state and local governments.

Control High Interest Vessel movements. With added personnel resources and additional small

craft, the Coast Guard will increase boarding and escort operations to protect vessels carrying large numbers of passengers, and vessels with dangerous cargo such as liquefied natural gas or other volatile products from becoming targets. Coast Guard Sea Marshals will also board and control the movements of vessels where necessary to prevent the vessel itself from becoming a weapon, and to protect port populations and infrastructure, nuclear power plants situated along a seacoast or major river, bridges, and the like.

Domestic and international coordination. TSA, MARAD, and the Coast Guard will coordinate with the international community and Federal and State agencies to improve coordination of container identification, tracking, and inspection.

The security of U.S. seaports is vulnerable due to the weakness of port and cargo security in some of the countries with which the U.S. conducts maritime trade. As a proactive strategy, MARAD will facilitate improvements in port and cargo security in Latin America and the Caribbean through continued interaction with the Organization of American States (OAS). The results of this effort are expected to reduce the security risk of U.S. seaports shipping cargo between their Western Hemisphere trading partners.

Port and cargo security guidelines are an important tool to assist seaports in evaluating and improving their security. To support U.S. seaports, MARAD and the Coast Guard will develop model port security guidelines for commercial strategic ports.

Since security is an important aspect of the overall readiness of the commercial strategic ports, the Coast Guard and MARAD will test deployment plans through port security readiness exercises. The result will be assessment information derived from a standard process for evaluating commercial strategic port readiness.

Training is an indispensable necessity for the commercial strategic ports to meet enhanced port and cargo security standards. To assist ports in meeting more stringent standards, MARAD will conduct security modules within strategic port defense workshops for Federal and commercial port officials. Uniform instruction will facilitate systemic improvements in port and cargo security standards and reduce security risks for those seaports putting the guidelines into practice.

**Other Federal Programs with Common Outcomes:** DOT coordinates closely with the Office of Homeland Security, the Department of Defense, the State Department, Customs Service, Immigration and Naturalization Service, and with local and state governments to ensure security in our ports and waterways.

**Performance Report:**

**USCG supplementary performance measure\*:**

Percentage of days that the designated number of critical defense assets (high endurance cutters, patrol boats, and port security units needed to support Defense Department operational plans) maintain a combat readiness rating of 2 or better.

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	100%	100%	*	*
<b>Actual:</b>	4%	51%	67%#		

# Data are for the first three quarters of the year. Fourth quarter data was destroyed in the attack on the Pentagon.

\* After 2001, this goal will be an operating administration performance goal 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 performance target for providing combat ready units. High endurance cutter and patrol boat readiness remained nearly constant, meeting DOD plan requirements 91% and 100% of the time respectively. Similarly, port security units' readiness improved by approximately 3%, which was validated by actual performance and response following incidents on September 11th when they rapidly deployed to New York, Boston, Los Angeles/Long Beach and Seattle to improve security capabilities in these harbors.

Following the attacks on September 11, the Coast Guard quickly shifted to the biggest port security operation since World War II. The FY 2002 Intelligence Authorization Act elevated the Coast Guard to full membership in the national intelligence community, allowing better access to information and increasing awareness of marine traffic on the Nation's maritime borders.

Emergency rules and new operations were established and implemented to set positive control over vessel movements, and to quickly gain a greater and earlier awareness of which ships are approaching the U.S. The Coast Guard began vessel escorts, a ship rider program similar to sky marshals for ships needing positive control of navigation and engineering spaces, and established security zones and restricted navigation areas, and tighter controls over the movement and operation of vessels carrying cargoes of significant risk such as liquefied natural gas carriers. Coast Guard and Navy (under Coast Guard operational authority) patrol efforts were diverted immediately from other missions to establish an armed law enforcement and military presence to ensure security at the approaches to all major ports.

**FY 2002 Performance Plan Evaluation:** This is a new goal for 2003, and in 2002, DOT is beginning a multi-year task of thoroughly assessing seaport vulnerability. An interagency vulnerability assessment process led by the Coast Guard will complete 55 comprehensive port vulnerability assessments by 2004.

***Management Challenge – Cargo Security (IG)***

***Coast Guard Capital Acquisition Budget (IG/GAO)***

The IG has stated that:

- stabilizing Coast Guard's missions and budget requirements in light of post-9/11 priorities;
- making progress on Deepwater, while at the same time moving with dispatch on National Distress and Response System and Search and Rescue procurements;
- meeting Coast Guard's enhanced port security mission, while continuing to effectively meet Coast Guard's other responsibilities; and,
- strengthening cargo security;

are major management challenges facing DOT. Ensuring robust port and maritime security is a national priority and an intermodal challenge, with impacts in America's heartland communities just as directly as the U.S. seaport cities where cargo and passenger vessels arrive and depart daily. The United States has more than 361 ports containing more than 3,700 passenger and cargo terminals. Current growth predictions indicate that container cargo will double in the next 20 years. The biggest cargo security challenge facing DOT is how to ensure that legitimate cargo is not unnecessarily delayed as we introduce enhanced security measures against security threats.

As described above, the Department is undertaking the largest port and waterway security ramp-up since World War II, in concert with other Federal, State, and local authorities, and the port industry. The Department was well equipped with existing statutory authority to develop the immediate maritime security response our Nation has required. These steps have formed the core of our near-term response to the new maritime and port security environment:

Coast Guard: 1) refocused resources to protect high consequence targets in the marine environment, including critical bridges, port facilities and other infrastructure; 2) issued emergency regulations requiring 96-hour advance notices of arrival for ships arriving in U.S. ports, and expects to make that regulation permanent by the summer of 2002; 3) working with the Office of Naval Intelligence, tracks inbound high-interest vessels and providing intelligence on the people, cargoes and vessels to operational commanders and interested agencies; 4) deployed personnel as Sea Marshals and small boat escorts to ensure positive control of vessels containing critical cargoes and in sensitive areas.

MARAD: 1) is working with the maritime industry to examine and address security issues and policy; 2) heightened security at its Ready Reserve Force fleet sites and outpost

TSA: along with MARAD and an inter-departmental Credential Direct Action Group is examining ways that advanced technologies, including smart cards, biometrics and public key infrastructure, can be used throughout the maritime and related industries in order to accurately identify employees working in security-sensitive areas.

SLSDC: is working closely with its Canadian counterpart and the Coast Guard to heighten security on the St. Lawrence River and ensure the protection of ocean access to our Great Lakes ports.

In addition, on February 28, 2002, Secretary Mineta announced the implementation of the Port Security Grants Program from which TSA will distribute approximately \$93 million in grant money to seaports to finance port security assessments and the cost of enhancing facility and operational security at critical national seaports.

The Deepwater Project is the largest capital improvement project ever undertaken by the USCG. The IG has acknowledged that the USCG is using an innovative planning process which, when completed, should provide a good basis for establishing needs and managing the Coast Guard's acquisition strategy. However, the IG and GAO have stated that there are several critical challenges remaining, including ensuring the planning progress includes a realistic level of funding and using a process to assess the readiness of proposed technology.

The Deepwater Capability Replacement Project will provide a performance-based acquisition focused on required Coast Guard mission capabilities, rather than specifications for specific assets. The Coast Guard will contract with a single System Integrator to acquire an integrated system of surface, air, command and control, intelligence and logistics systems. Focusing the Government's contract on required capabilities allows and encourages the System Integrator to use innovative available technologies and processes that will maximize operational effectiveness while minimizing total ownership cost. The Coast Guard's acquisition effort is ongoing with three industry teams, and a contract award is anticipated in FY 2002.

The IG identified the Coast Guard Search and Rescue program's effectiveness as needing additional focus due to staffing, training and capital asset readiness problems; particularly with regard to budget and acquisition schedule estimates for replacing the National Distress and Response System (NDRS). NDRS' primary focus is on search and rescue detection and response. However, this integrated system is also the Coast Guard's coastal and port command and control

solution, both for managing Coast Guard assets and for coordinating operations with local, State, and other Federal agencies. The FY03 budget fully funds NDRS. Initial operational capability for NDRS will occur in FY 2003, and full deployment of NDRS will be finished by 2006. Training and staffing are addressed in the Maritime Safety goal page.

FY 2002

- Award Deepwater contract (June 2002)
- Award NDRS full-scale development contract (September 2002)

FY 2003

- In FY 2003, the Coast Guard and System Integrator will finalize the Deepwater Performance Measurement Plan. Once the plan is complete and the targets are determined, the performance measures will be monitored and analyzed.
- To control costs, the Coast Guard will work closely with the System Integration Contractor to control the design and construction of Deepwater assets. Quarterly and annual reviews will be conducted to evaluate the performance of the System Integrator and product performance. The Coast Guard will maintain positive control over the integrator who will act only on the Coast Guard's task orders.

**STRATEGIC MOBILITY:** To maximize DOD’s logistics capability and minimize its cost, defense sealift increasingly relies on the U.S. commercial sector. The ability of the United States to respond to future military contingencies will require adequate U.S.-flag sealift resources, skilled U.S. maritime labor, and the associated maritime infrastructure. DOT helps provide for a seamless, time-phased transition from peacetime to wartime operations while balancing the defense and commercial elements of our transportation system. The Ready Reserve Force (RRF) is a key source of strategic sealift capacity to support the rapid deployment of U.S. military forces during the early stages of a military crisis. Merchant mariners employed on commercial vessels in the U.S. domestic and international trades provide the core job skills needed to crew the RRF. DOT is responsible for establishing DOD's prioritized use of ports and related intermodal facilities during DOD mobilizations, when the smooth flow of military cargo through commercial ports is critical.

**Performance Goals:**

Ensure sufficient contingency sealift and commercial outload ports are available to support DOD mobilization requirements.

**Performance Plan:**

**Performance measures:**

Percentage of DOD-required shipping capacity complete with crews available within mobilization timelines.

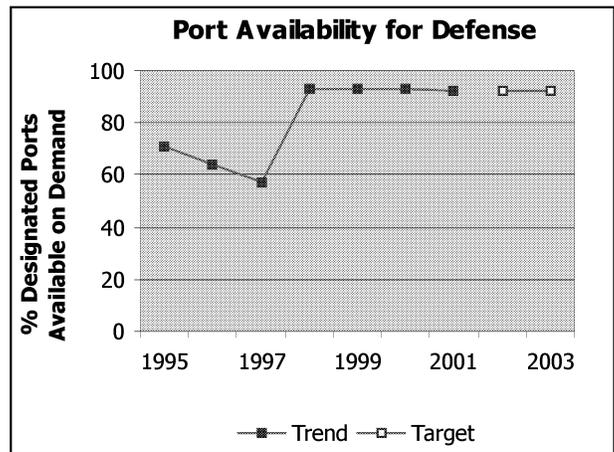
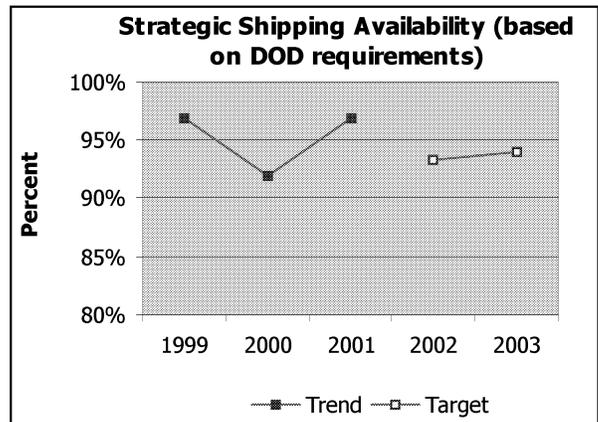
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	93%	94%
<b>Actual:</b>	97%	92%	97%		

Percentage of DOD-designated commercial ports available for military use within DOD established readiness timelines.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	90%	90%	93%	92%	92%
<b>Actual:</b>	93%	93%	92%		

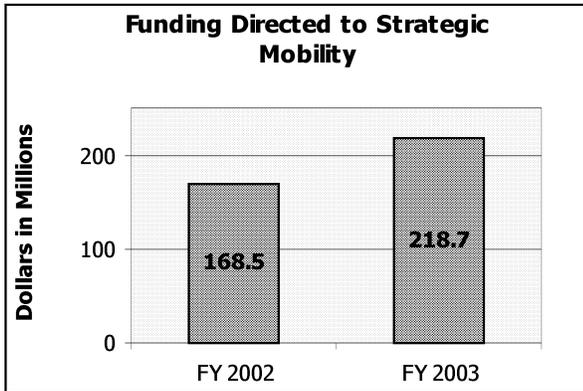
**Note on data:** The Department’s mobilization goals of the past were independently measured, but our goals were undeniably linked. For instance, succeeding with ship capacity but failing to provide the mariners only provides a fraction of what DOD expects from the Department in time of war. Therefore, the new shipping capacity measure replaces three from the previous performance plan. In 2001, the number of DOD-designated ports decreased by one, so the target has been adjusted to show the effect. DOT’s goal of ensuring that only one of the critical ports of embarkation for military logistic requirements will be unavailable has not changed.

**External Factors:** Business decisions resulting in further globalization and consolidation of shipping companies could reduce the availability of U.S.-flag sealift capacity.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



DOT’s ability to provide adequate reserve sealift depends on three elements in combination: adequate privately owned U.S.-flag merchant shipping available for defense logistic needs, adequate government-owned reserve sealift, and an adequate base of qualified, available mariners to crew the ships DOD needs for its strategic sealift reserve. DOD funds the RRF, and MARAD manages it.

MARAD will jointly work with DOD and carriers to ensure the continued full commitment of commercial capacity to MSP and VISA (\$98.7 million). In addition, MARAD, DOD and the industry will seek to ensure rapid crewing of RRF vessels and increased efficiency of the fleet sites to speed activations. MARAD will continue the RRF maintenance and repair regimen for all RRF vessels in FY 2003 and provide for berthing arrangements for each RRF ship according to its prescribed readiness status.

MARAD will:

- continue to provide for training of new merchant marine officers through the operation of the United States Merchant Marine Academy (\$49.7 million) and support of the six state-run regional maritime academies (\$7.6 million). These training programs replenish the pool of available officers and maintain and increase the competence of current mariners through continuing education programs.
- continue a variety of port readiness activities including: testing deployment plans through port readiness exercises; conducting strategic port defense workshops for Federal and port stakeholders; developing or updating port readiness initiatives such as port security manuals, port readiness workshops, and port

planning orders; monitoring strategic port availability on a monthly basis; and conducting semi-annual port assessments with the Military Traffic Management Command (MTMC).

**Other Federal Programs with Common**

**Outcomes:** The U.S. Transportation Command (USTRANSCOM) is responsible for ensuring adequate sealift transportation of military cargo to support military needs. They determine the readiness status and siting of RRF ships in order to support their force projection mission and provide annual program planning guidance so that MARAD can develop RRF budget requirements.

DOD relies upon commercial merchant mariners to crew the ships activated for sealift purposes. MARAD meets regularly with DOD personnel to coordinate planning for crewing requirements.

Under a 1984 Memorandum of Understanding (MOU) on Port Readiness, nine Federal agencies and organizations – MARAD, MTMC, the U.S. Army Corps of Engineers, the U.S. Coast Guard, the Military Sealift Command, the commands of the Maritime Defense Zone, the U.S. Army Forces Command, USTRANSCOM, and the U.S. Atlantic Command – agreed to share responsibilities for support of the efficient movement of military forces and supplies through U.S. ports. The MOU establishes a National Port Readiness steering group and a working group, both chaired by MARAD that contain representatives of all nine agencies. The steering group provides policy direction and sets broad priorities for accomplishing the objectives set forth in the MOU and the working group implements them.

**Performance Report:**

**MARAD supplementary performance measures\*:**

Ship capacity (in thousands of twenty-foot container equivalent units (TEUs)) available to meet DOD’s requirements for intermodal sealift capacity.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	165	165	165	165	*
<b>Actual:</b>	162	171	168		

Percent of RRF no-notice activations that meet assigned readiness timelines.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	100%	100%	100%	100%	*
<b>Actual:</b>	100%	100%	100%		

Percent of days that RRF ships are mission-capable while under DOD control.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	99.0%	99.0%	99.0%	99.0%	*
<b>Actual:</b>	98.4%	97.0%	99.3%		

Of the mariners needed to crew combined sealift and commercial fleets during national emergencies, the percent of the total that are available.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	100%	100%	100%	100%	*
<b>Actual:</b>	122%(r)	117%	120%		

*(r) Revised. Shipping capacity measure is stated in thousands of TEU's.*

*\* Performance measures are discontinued after 2001. They have been collapsed into the 2003 sealift measure above to provide a more systematic measure of the outcome DOT seeks. MARAD will continue to track each of these performance measures and they will be discussed in the context of this goal.*

**2001 Results:** DOT met the sealift capacity, RRF and mariner availability performance targets. During 19 test activations, RRF ships were brought out of reduced status, fully crewed, and made available to accept cargo.

MARAD exceeded the mission-capable goal and reversed a two-year negative trend. The 13 RRF ships operated by MSC in FY 2001 missed only 15 operating days (due to the need for repairs) out of a total of 2,010 operating days desired by MSC.

In the aggregate, the number of mariners available exceeded the number of mariners required to meet sealift requirements for DOD's most likely mobilization scenario. While aggregate mariner supply exceeds projected demand, this is not the case where highly specialized experience is needed for some crew positions. The FY 1999 performance data was revised slightly based upon the use of the

availability percentage validated by the 2001 Mariner Survey.

Twelve out of 13 strategic ports, or 92%, were determined to meet the availability criteria.

**FY 2002 Performance Plan Evaluation:** DOT expects to meet the performance targets in 2002.

**DRUG AND MIGRANT INTERDICTION:** Illegal drugs threaten our children, our communities, and the social fabric of this country. Illegal immigration also poses a serious threat to America’s economic and social well-being, and challenges the integrity of our borders as a sovereign Nation. Approximately 52,000 deaths occur annually in America from drug abuse and drug-related crimes, accidents, and illnesses. The Coast Guard seized a record 62.9 metric tons of cocaine, and 15.7 metric tons of marijuana in 2001. An untold number of illegal migrants perish each year when overloaded and unseaworthy vessels founder at sea.

**Performance Goals (Drug goals set by Office of National Drug Control Policy):**

- By 2005, reduce current drug use among 12-17 year olds by 10 percent.
- By 2005, reduce current drug use among 18 year olds and older by 10 percent.
- By 2008, reduce current drug use among 12-17 year olds by 25 percent.
- By 2008, reduce current drug use among 18 year olds and older by 25 percent.
- Reduce illegal immigration across U.S. sea borders.

**Performance Plan:**

**Performance Measures:**

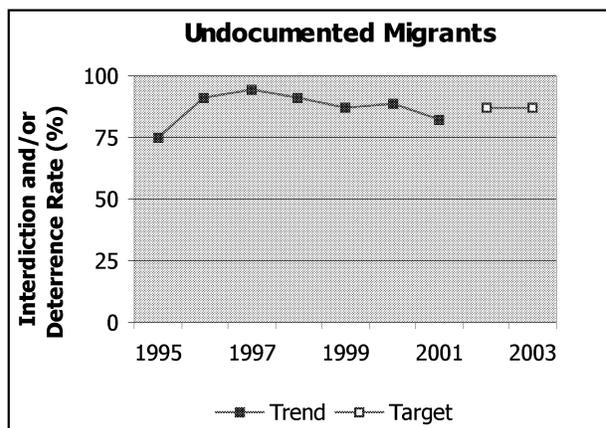
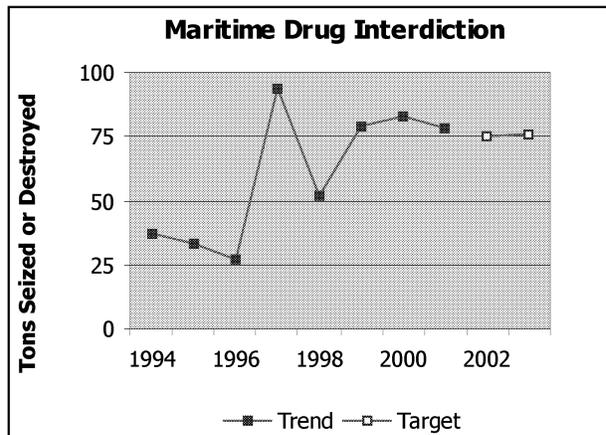
Amount of drugs seized or destroyed at sea (metric tons).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	N/A	75	76
<b>Actual:</b>	78.7	83.2	78.6		

Interdict and/or deter at least 87 percent of undocumented migrants who consider attempting to enter the U. S. via maritime routes.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	87%	87%	87%	87%	87%
<b>Actual:</b>	86.7%	89%	82.5%		

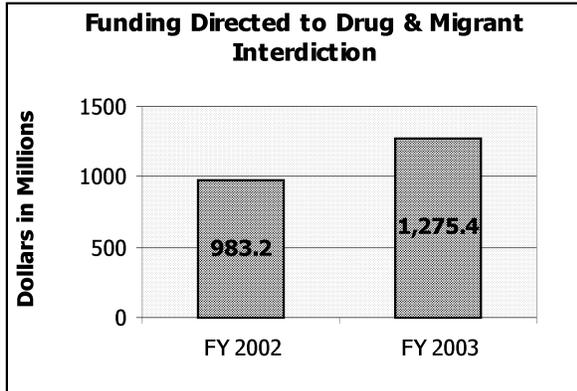
**Note on data:** DOT endorses the attempt to estimate the availability of all four primary drugs (cocaine, marijuana, methamphetamine, and heroin) by the end of FY 2002. DOT is making the drug performance measure more comprehensive by including all drugs seized or destroyed at sea by the Coast Guard, in addition to cocaine. Data for the previous measure, the seizure rate for cocaine shipped through the transit zone, is obtained too late to be of use in managing performance, but will be discussed in the performance report section. To provide a more understandable migrant interdiction performance measure, DOT will invert the former performance measure and calculate the percent of undocumented migrants interdicted and/or deterred vs. the percent of undocumented migrants that have successfully entered the U.S. over maritime routes.

**External Factors:** Socioeconomic conditions here and abroad, and political and economic conditions abroad influence demand and supply for illegal drugs, and cause variations in illegal migration patterns.

**Strategies and Initiatives to Achieve 2003 Target:** DOT resources attributable to this



performance goal are depicted below:



Reducing the supply of drugs entering the U.S. is an important element of the President’s National Drug Control Strategy, and enforcing immigration laws is a vital component of maintaining the sovereignty of U.S. borders. The USCG, FAA, and NHTSA contribute to the interagency effort to reduce demand and supply. The Coast Guard Commandant serves as the U.S. Interdiction Coordinator for the ONDCP Director, coordinating yearly operations plans to ensure harmony of interagency effort. The Coast Guard will:

- operate along maritime routes to deter and defeat attempts at smuggling drugs and undocumented migrants into the U.S.;
- establish agreements with source countries to reduce migrant flow;
- use intelligence to continually improve patrol plans and tactics to provide both deterrence and effective enforcement;
- finalize a interagency study (with ONDCP and the Customs Service) of the deterrent effect that interdiction creates on drug trafficking organizations;
- develop more capable sensors, advanced vessel search technologies, and non-lethal interdiction technologies;
- develop tactical data exchange systems; and
- provide advice and assistance under State Department auspices for migrant source countries in improving law enforcement efforts against organized migrant smugglers.

Owing to the diversion of Coast Guard operating forces to coast and port security duties following last September’s terrorist attacks, the 2002 and

2003 performance targets have been adjusted to reflect the effect of the Coast Guard’s additional emphasis. The Coast Guard will continue to restore operating forces to these missions as resources allow.

**Other Federal Programs with Common**

**Outcomes:** The ONDCP coordinates overall U.S. drug policy, and sets national objectives and goals in the National Drug Control Strategy and accompanying performance measures and objectives. USCG and the Customs Service coordinate to provide law enforcement defense in depth against drug traffickers. The Defense Department provides detection and monitoring support, and provides ships to augment interdiction efforts at sea. The State Department provides diplomatic liaison with other countries and supports DOT efforts in bilateral agreements to counter drug smuggling. The Justice Department coordinates drug intelligence.

The U.S. Border Patrol enforces U.S. immigration laws on shore, while the Coast Guard enforces immigration law at sea. The Coast Guard regularly coordinates with the State Department, INS, and the Border Patrol on immigration issues and potential international agreements.

**Performance Report:**

**USCG supplementary performance measure\*:**

Seizure rate for cocaine that is shipped through the transit zone (high seas between source countries and the United States).

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	12.5%	13%	15%	18.7%	*
<b>Actual:</b>	12.2%	10.6%	11.1%#		

# Preliminary estimate based on 2000 cocaine flow quantity.

\* After 2001, this goal will be an 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 either performance target.

Despite Coast Guard seizure of a record 62.9 metric tons of cocaine, last year’s increase in the total flow of cocaine through the transit zone has

continued, outpacing the Coast Guard's increasing drug interdiction successes.

Improvements in intelligence and intelligence-sharing/fusion have allowed the Coast Guard to focus its resources on cases involving larger quantities of drugs in the eastern Pacific. Interdictions in this region accounted for 89 percent of all drugs seized by the Coast Guard in 2001.

There were 3,666 successful migrant landings on U.S. shores. There was an estimated maritime migrant threat of 21,000. Migration from the Caribbean continued to provide the majority of maritime interdictions. Cuban migration was steady but slightly less than in previous years, but Haitian migrant smuggling dramatically increased. There were several significant Cuban smuggling cases involving migrant deaths or missing persons.

**FY 2002 Performance Plan Evaluation:** Even with the need to refocus operations on coastal and port security, DOT expects to meet the performance targets.

**CRITICAL TRANSPORTATION INFRASTRUCTURE PROTECTION:** The U.S. transportation system is one of the most developed in the world, covering a large geographical area and numerous modes of travel. The system increasingly relies on information and telecommunications systems. Given our open society, the transportation system is vulnerable to attempts to destroy or degrade its infrastructure and performance. The goal and intent of Executive Order 31228 is to reduce the vulnerability of the Nation’s critical infrastructure through public-private partnership. To assure the integrity of the nation’s transportation system and to ensure the confidence of the public in safe, secure and efficient transportation services, DOT has a three pronged approach to transportation security: 1) through intelligence gathering and information sharing, we identify threats and communicate that information quickly to non-Federal owners of critical transportation infrastructure who must act to protect their assets; 2) DOT takes proactive measures to protect critical transportation infrastructure through vulnerability assessments and remediation steps to address the vulnerabilities; and 3) DOT works in partnership with industry to identify and counteract infrastructure vulnerabilities and transportation disruptions.

**Performance Report:**

**Discontinued performance measure:**

Of those who need to act, percent who receive threat information within 24 hours.

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	##	##	*	*
<b>Actual:</b>	##	##	N/A		

## Not published in part due to sensitive information being protected under 14 CFR Part 191; N/A Not available.

\* Performance measure is discontinued after 2001, but protection of critical transportation infrastructure is a key part of DOT’s homeland security mission. The Under Secretary for Transportation Security will undertake a review of transportation security policy across each mode of transportation and in particular, how DOT needs to measure performance in this critical area. After that review is complete, DOT will decide on new performance measures to include in its Performance Plan.

**External Factors:** State and local agencies and businesses own and operate the majority of the Nation’s transportation infrastructure. Achievement of our goal relies on increased coordination and cooperative partnerships with private industry and law enforcement, and on the willingness of industry to adjust security procedures based on threat information provided by DOT.

**2001 Results:** DOT did not meet the performance target. As the events of 9/11 made clear, DOT neither possessed nor distributed information sufficient to thwart the nineteen terrorists in their plan to attack New York city and

Washington, DC. The Aviation and Transportation and Security Act President Bush signed on November 19, 2001 created the Transportation Security Administration, which will be responsible for formulating security policy, and for coordinating security plans for all modes of transportation.

In 2001, DOT:

- implemented a Department wide IT security program;
- completed a comprehensive annual agency IT security program review of DOT, in accordance with the Government Information Security Reform Act (GISRA).
- prepared a plan and template for updating the inventory of PDD-63 systems with specific plans for assessment, remediation, certification and authorization.
- established an IT security committee - a valuable forum for addressing IT security issues of interest to the entire Department.
- trained 95% of DOT’s workforce on general security awareness. FAA launched an extremely aggressive security awareness campaign. Training will be complete in 2002.

In the aftermath of the terrorist incidents of September 11, FMCSA conducted more than 36,000 Security Sensitivity Visits (SSVs) to increase the level of awareness of hazardous materials carriers to terrorist threats, identify potential weaknesses in carrier security programs, and report potentially serious security issues to the appropriate authorities. The SSVs have resulted in 280 findings of suspicious activities with 126 referrals to the FBI.

**Other Federal Programs with Common**

**Outcomes:** DOT's performance in protecting transportation infrastructure depends to a substantial degree on our effectiveness in maintaining close liaison with numerous law enforcement agencies, such as the Federal Bureau of Investigation, Central Intelligence Agency, U.S. Secret Service, State Department, and local police departments to acquire current threat information against transportation systems and facilities. This affords DOT access to information on current terrorist activities to transportation operational elements worldwide.

In implementing the requirements of Section 1012 of the USA PATRIOT Act, FMCSA is coordinating with the U.S. Department of Justice, the U.S. Department of Health and Human Services, and the American Association of Motor Vehicle Administrators, in developing procedures for performing a security risk review process for all persons seeking issuance, renewal, upgrade, or transfer of a hazardous materials endorsement for a commercial driver's license (CDL).

**Management Challenge – Computer Security (Department-wide and FAA) (IG/GAO/OMB)**

The IG, GAO, and OMB have identified information system security as a critical government-wide management challenge, and in particular, have identified FAA air traffic control information systems as needing special attention to harden them against malicious or criminal attack.

The DOT Chief Information Officer (CIO) will lead intermodal efforts to ensure the continued security of our transportation information systems to make IT systems less vulnerable to attack and other service disruptions, including those caused by natural disasters.

The Computer Security Challenge presents itself on two fronts: 1) protection of all IT assets as required by the Computer Security Act of 1987, the Government Information Security Reform Act (GISRA), OMB Circular A-130, National Institute of Standards and Technology guidance, etc.; and, 2) specific protection of critical IT assets in accordance with Presidential Decision Directive 63 (PDD-63).

DOT has established an IT Security Program requiring that all DOT IT Systems be assessed to

identify vulnerabilities; that vulnerabilities be evaluated and mitigated where justified; and, that systems be tested and certified as adequately protected. To judge our progress, we have set the following milestones and goals:

Key 2003 Milestones:

- Achieve at least one grade improvement in Federal classifications for the IT security program;
- Fully integrate IT security into the e-Government, capital planning, and enterprise architecture processes;
- Establish standards for authentication and digital signatures (reviewing technologies such as Public Key Infrastructure (PKI) and biometrics) for the Department that contribute to operational and economic efficiencies;
- By January 2003, establish and operate a Department-wide monitoring and reporting capability;
- By January 2003, complete an update of the Department IT security governance structure;
- By December 2002, complete the inventory of DOT mission-critical and PDD-63 systems systems, and develop a plan for the completion of certification/accreditation of those systems by December 2005;
- By December 2003, develop a PKI prototype, including digital signature capabilities, for use within the Department.

FAA has developed a concept of operations, approach, and major milestones to address information security issues and protect information assets. The FAA approach focuses on protecting the operational capability of its facilities, which requires an integrated approach to information systems, personnel, and physical security at each facility. Other efforts to protect both the air traffic system infrastructure and to ensure that new systems incorporate security include:

- Authorizing and certifying computer security systems;
- Training FAA personnel in security awareness and vulnerability assessments; and
- Improving intrusion detection capability.

**ENERGY EFFICIENCY:** Moving people and goods requires more than one-quarter of the total energy used in the United States and accounts for two-thirds of U.S. petroleum consumption. Transportation is nearly totally dependent on oil for energy, and over half of the petroleum used in the United States must be imported. This dependency makes the U.S. economy particularly vulnerable to supply disruptions.

**Performance report:**

**Discontinued performance measure:**

Transportation-related petroleum consumption (in quadrillion BTUs) per trillion dollars of Real Gross Domestic Product (GDP).

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	2.80	2.76	*	*
<b>Actual:</b>	2.85	2.88(r)	2.78#		

(r) Revised; # Projection from trends.

\* Performance measure is discontinued after 2001.

**External Factors:** Economic growth translates to growth in transportation energy consumption, because people and businesses travel more. Demand for private vehicles tends to follow energy price trends, and vehicle makers provide choice to consumers, allowing shifts to more fuel-efficient or alternative-fuel vehicles.

**2001 Results:** Based on a projection from trend data, DOT did not meet the performance target.

**FY 2002 Performance Plan Evaluation:** DOT will not report on this performance goal in 2002, since this is not a core mission of DOT, but of other Federal agencies – principally Department of Energy and the Environmental Protection Agency. However, this does not signal a lack of commitment from DOT to the National Energy Policy, or the President’s policy on reducing air pollution and greenhouse gas emissions.

NHTSA will fulfill its statutory responsibility of reviewing and establishing Corporate Average Fuel Economy (CAFE) standards toward the goal of improving energy efficiency. Analysis of manufacturers’ capability to improve the fuel economy performance of their light duty vehicles, a review of automotive technologies that could achieve higher fuel efficiency, the environmental implications of higher CAFE standards, and the economic practicability of emerging technologies, will provide the basis for developing the most cost effective policies to increase fuel economy and to

reduce fuel consumption and costs per mile traveled.

**Other Federal Programs with Common Outcomes:** DOT supports the Comprehensive National Energy Strategy. The Federal R&D partnership for next generation vehicle development includes the Departments of Commerce, Defense, Energy, and Transportation, as well as the Environmental Protection Agency. DOT leads an interagency task force on Bicycling and Walking. Members of the task force include the Department of the Interior, Consumer Product Safety Commission, Environmental Protection Agency, General Services Administration, and Centers for Disease Control.

## Performance Goals – Mobility and Economic Growth

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## STRATEGIC GOALS: MOBILITY and ECONOMIC GROWTH

*Shape an accessible, affordable, reliable transportation system for all people, goods, and regions.*

*Support a transportation system that sustains America's economic growth.*

### **W**e Aim To Achieve These Strategic Outcomes:

- Improve the physical condition of the transportation system.
- Reduce transportation time from origin to destination for the individual transportation user.
- Increase the reliability of trip times for the individual transportation user.
- Increase access to transportation systems for the individual user.
- Reduce the cost of transportation for the individual user.
- Ensure the Producer Price Index for transportation services grows less rapidly than the overall PPI through the year 2005.
- Reduce barriers to trade that are related to transportation.
- Improve the U.S. international competitive position in transportation goods and services.
- Improve the capacity of the transportation workforce.
- Expand opportunities for all businesses, especially small, women-owned, and disadvantaged businesses (discussed in the Organizational Excellence chapter).

Mobility as much as any other factor defines us as a Nation, and is intertwined with the Nation's economic growth. It connects people with work, school, community services, markets, and other people. The U.S. transportation system carries over 4.6 trillion passenger-miles of travel and 3.9 trillion ton-miles of freight every year – generated by more than 276 million people and 6 million businesses.

DOT's aim is an affordable, reliable and accessible transportation system. To achieve reliability and accessibility, our transportation system frequently relies on common public

infrastructure that is maintained on limited national resources – our land, waterways, and airspace. DOT's objective is to optimize capital investment in these public systems and manage them to maximize the benefit to all Americans. The FY 2003 budget proposes \$38.9 billion in mobility funding to meet this challenge.

A summary performance report, and a detailed analysis of 2003 strategies follow.

#### **Performance Goals**

##### Improve Physical Condition

###### Highway Infrastructure Condition

[With deficient bridge and Appalachian Development Highway System mileage goals in FHWA performance plan.]

##### Reduce Transportation Time and Improve Service

###### Highway Congestion

[With urban peak-period travel time, annual additional travel hours, and ITS deployment goals in FHWA performance plan.]

###### Transit Ridership

[With passenger miles traveled goal in FTA performance plan.]

##### Increase Trip Time Reliability

###### Aviation Delay

[With air traffic system capacity and efficiency goals in FAA performance plan.]

###### Maritime Navigation

[With icebreaking goal in USCG performance plan.]

##### Increase Access to Transportation

###### Transportation Accessibility

[With transit system condition goal in FTA performance plan.]

##### Reduce Trade Barriers and Improve International Competitiveness

###### International Air Service

## Performance Report: Mobility and Economic Growth

	1995	1996	1997	1998	1999	2000	2001	2001 Target	Met	Not Met
Percent miles of NHS roads meeting pavement performance standards	89.6	91.1(r)	91.8	92.1	93.0	93.5(r)	93.9#	91.9	✓	
Percent of deficient NHS bridges	25.7	25.8	23.4	23.1	23.0	21.5	21.2	22.3	✓	
Percent of runways in good or fair condition	N/A	93	95	95	95	95	95.8	93	✓	
Runways accessible in low visibility conditions	N/A	N/A	1,044	1,083	1,084	1,109	1,229	1,191	✓	
Average condition of motor bus fleet	2.95	3.02	3.09	3.11	3.13	3.21	3.02	3.20		✓
Average condition of rail vehicle fleet	3.15	3.13	3.09	3.08	3.14	3.25	3.48	3.24	✓	
% of total annual urban-area travel occurring in congested conditions***	N/A	32.0	31.7(r)	32.1(r)	32.6	33.1	33.4#	33.4	✓	
Additional % of annual urban-area peak period travel time attributable to congestion***	N/A	43(r)	45(r)	47(r)	49(r)	51(r)	52#	52(r)	✓	
Average annual hours of extra travel time due to delays for the individual traveler in urban areas***	N/A	26.8(r)	28.1(r)	29.1(r)	30.6(r)	31.2(r)	31.7#	31.7(r)	✓	
Metropolitan areas where integrated ITS infrastructure is deployed	N/A	N/A	36	N/A	49	52	52	56		✓
Transit ridership in billion passenger-miles traveled	38.0	39.0	40.2	42.6	43.3	45.1(r)	46.3	44.8	✓	
% cumulative throughput increase during peak periods at certain major airports	N/A	N/A	N/A	N/A	N/A	N/A	3.9	3	✓	
% cumulative direct routings increase for en route flight phase	N/A	N/A	N/A	N/A	N/A	N/A	23.4	15	✓	
Percent of ports reporting landside and waterside impediments to the flow of commerce**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Aviation delays per 100,000 activities	154	181	161	191	220	250	254	171		✓
Commercial vessel collisions, allisions, and groundings	N/A	2,716 (r)	2,456 (r)	2,445 (r)	2,194 (r)	2,152 (r)	1,677*	2,204	✓	
Percent of days in shipping season that the U.S. sectors of the St. Lawrence Seaway are available, including the two U.S. locks in Massena, N.Y.	98	97	98	98.5	99.2	98.7	98.3	99		✓
Days certain critical waterways are closed due to ice	N/A	7	0	0	0	0	7	8^	✓	

## Performance Report: Mobility and Economic Growth

	1995	1996	1997	1998	1999	2000	2001	2001 Target	Met	Not Met
Amtrak's intercity ridership in millions of passengers	20.7	19.7	20.2	21.1	21.5	22.5	23.5	25.3		✓
Percent of key rail stations ADA compliant	19	19	26	29	49	52	67*	58	✓	
Percent bus fleets ADA compliant	60	63	68	72	77	80	85	83	✓	
Employment sites made accessible by Job Access and Reverse Commute transportation services	N/A	N/A	N/A	N/A	1,742	16,978 (r)	35,700 *	15,724	✓	
Passengers (millions) in international markets with open skies aviation agreements	34.5	38.4	40.7	43.0	49.4	56.8	56.2*	51.6	✓	
Percent subsidized communities with at least 2 round trips/day, 6 days/week (12 round trips/week)	N/A	N/A	N/A	100	100	100	100	100	✓	
Percent subsidized communities with at least 3 round trips/day, 6 days/week (18 round trips/week)	N/A	N/A	N/A	76	78	77	78	75	✓	
Miles of Appalachian Development Highway System completed	2,178	2,204	2,259	2,409	2,456	2,483	2,526	2,530		✓
Gross tonnage (in thousands) of commercial vessels on order or under construction in U.S. shipyards	N/A	N/A	579	407	595	1,100	1,162*	530	✓	
Students graduating with transportation-related advanced degrees from universities receiving DOT funding	N/A	N/A	N/A	1,167	1,086	1,154	1,160	1,203		✓
Cumulative number of students (in thousands) reached through Garrett A. Morgan Technology and Transportation Futures Program	N/A	N/A	71	1,031	1,502	3,000	N/A	5,000		

# Projection

N/A = Not Available

(r) Revised estimate

\* Preliminary estimate

\*\* Data for this goal were unreliable, and it was discontinued after 2001.

\*\*\* Methodology change (starting with 2000 data) makes historical data before 2000 unreliable. 2001 goal has been changed to new methodology.

^ Based on 2001 being a "severe winter."

**HIGHWAY INFRASTRUCTURE CONDITION:** The National Highway System (NHS) carries 1 trillion or 43 percent of vehicle-miles traveled (VMT), but consists of only 161,117 miles of rural and urban roads--just 4 percent of total highway miles—and 115,000 bridges. The system serves major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. The condition of this system can affect wear-and-tear on vehicles, fuel consumption, travel time, congestion, and comfort, as well as public safety. Improving pavement and bridge condition is also important to the long-term structural integrity and cost effectiveness of the transportation system. Approximately 21 percent of NHS bridges are either structurally deficient or functionally obsolete.

**Performance Goal:**

Improve and expand the NHS to increase system efficiency, slow the growth of traffic congestion, and improve safety.

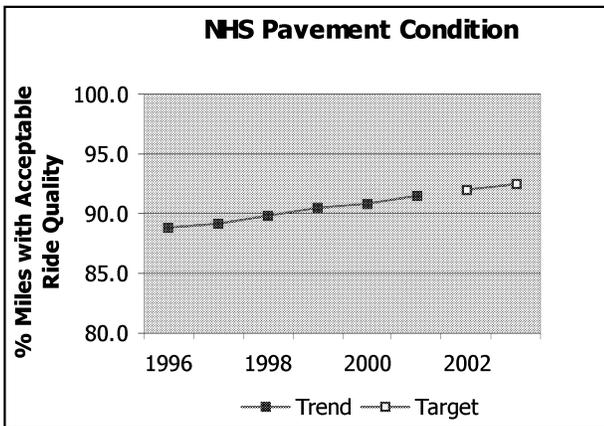
**Performance Plan:**

**Performance Measure:**

Percentage of travel on the NHS meeting pavement performance standards for acceptable ride.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	N/A	92.0	92.5
<b>Actual:</b>	90.5	90.9	91.5#		

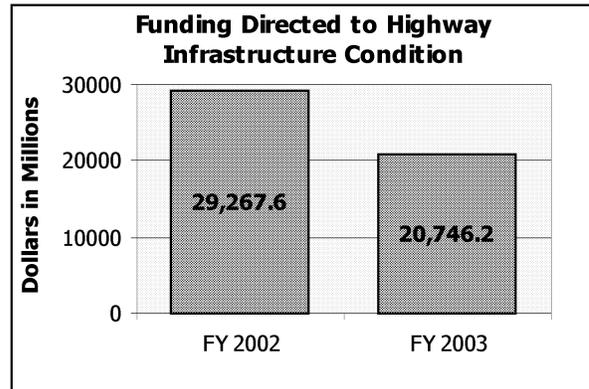
(r) Revised; # Projection from trends.

**External Factors:** VMT has grown annually by over 2 percent during the past decade, in consonance with the U.S. economy's growth. Growth in freight volume resulting in increased loads on pavement has increased pavement and bridge deterioration.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



FHWA will continue to work with the States and other authorities to promote infrastructure development and improvements using Surface Transportation Research program funding, grants, technical assistance and technological advances. Through the pavement smoothness team, FHWA will work with American Association of State Highway and Transportation Officials (AASHTO) to develop and deliver technology transfer and training programs to promote the implementation of pavement smoothness technologies. FHWA will provide technical assistance and training to State DOTs to implement these new technologies, and in cooperation with States and industry, will also continue to promote the Pavement Smoothness Initiative. FHWA will encourage equipment upgrade and adoption of recommended protocols, and work with profile measuring equipment manufacturers to offer better equipment for measuring pavement smoothness.

FHWA will provide technical assistance to increase the number of States achieving a medium or high rating for implementing high-performance bridge materials. Research and Bridge Program funds will support deployment of innovative and more durable materials, which are more resistant to

traffic loads and corrosive attack, resulting in less maintenance and traffic restriction. FHWA will continue to provide technical assistance to States and local governments in the use of high performance materials, new design techniques, and cost effective bridge design details.

**Other Federal Programs with Common Outcomes:** None.

**Performance Report:**

**FHWA supplementary performance measures\*:**

Percentage of miles on the NHS meeting pavement performance standards for acceptable ride.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	91.5	91.8	91.9	*	*
<b>Actual:</b>	93	93.5(r)	93.9#		

Percentage of deficient bridges on the NHS.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	22.8	22.5	22.3	*	*
<b>Actual:</b>	23.0	21.5	21.2		

Miles of the Appalachian Development Highway System (ADHS) completed.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	2,327	2,373	2,530	*	*
<b>Actual:</b>	2,456(r)	2,483	2,526		

# Projected. (r) Revised.

\* After 2001, the percent of NHS miles in good condition goal is replace by the one above. The remaining two goals will be operating administration performance goals and will continue to be tracked by FHWA. Results will be discussed in the context of this performance goal.

**2001 Results:** Based on projections from trends, DOT met both the pavement condition and the bridge condition performance targets. DOT did not meet the ADHS target.

DOT provided Federal-aid highway funds to States as guaranteed by TEA-21, and as appropriated by Congress. Through its Innovative Bridge Research and Construction program, FHWA provided funds to 38 States for 58 projects in 2001. These projects were selected based on their potential to demonstrate the application of innovative material

technology in bridge construction. FHWA will use the results of these projects in assisting State and local governments to improve bridge design, construction, rehabilitation and maintenance.

**FY 2002 Performance Plan Evaluation:** DOT anticipates it will meet the 2002 performance target.

***Management Challenge – Highway Trust Fund Receipts/Allocation (GAO); and Trust Fund Balances and Grant Fraud (IG)***

The June 2000 GAO report stated that there is little assurance that Highway Account funds distributed to the States are accurate given the information currently available. Although the Treasury Department and FHWA are taking actions to review and improve their estimating processes, these actions are not sufficient to correct the weaknesses. Therefore, to reduce the risk of errors and increase the reliability of the information used to distribute Federal highway program funds to the States, GAO made these recommendations to DOT:

- Perform detailed, independent verifications of motor fuel data used in the process.
- Fully document FHWA’s current analysis methodology for State motor fuel data.
- Conduct an independent, comprehensive review of this methodology.
- Evaluate the potential reliability of the Internal Revenue Service’s ExFIRS data as a tool to validate State motor fuel data.

FHWA officials agreed with all of the recommendations aimed at improving the reliability of FHWA’s attribution process, and FHWA has developed a comprehensive action plan to implement the recommendations.

FHWA will work with States to ensure that funds are being obligated for valid highway projects and to reduce the dollar value of inactive obligations for highway infrastructure projects by 10 percent per year. This will ensure that unused funds associated with completed, cancelled, or unnecessary projects are put to good use.

The DOT IG reported that as of March 2001, FHWA had 25,000 obligations, totaling about \$2.6 billion that had no expenditures within 18 months. The IG’s review of 10 states’ inactive obligations identified \$238 million that no longer represented

valid liabilities, and these funds were used by the States on other valid projects, or returned to the Treasury. FHWA will continue to work with States to ensure that funds are being obligated for valid highway projects and to ensure that unused funds associated with completed cancelled, or unnecessary projects are put to good use. FHWA will work to reduce the dollar value of inactive obligations for highway infrastructure projects by 10 percent per year.

FHWA will encourage efficient use and management of Federal fund, and better project funds management. As a facilitator and promoter of best business practices, FHWA can contribute to this goal by assisting the Federal, State, and locals in the planning phase to identify projects that are ready for advancement; streamlining the environmental process; encouraging the use of innovative contracting; applying innovative finance techniques such as advance construction, GARVEE bonds, State infrastructure banks, or tapered match.

Additional resources deployed in this area will enable the FHWA to improve its management of the Federal-aid highway program, including cost containment, while allowing the States maximum delegated authority and flexibility, as appropriate. As larger and more complex projects are completed, a balance must be achieved between addressing the needs of major projects and the vast majority of the program vested in smaller projects.

**HIGHWAY CONGESTION:** Delay on the Nation’s highway systems is a major cost to motorists - amounting to \$72 billion in 1997 in lost wages and wasted fuel. Congestion adds to the cost of production, drives prices up, and reduces funds available for investment in product development or firm expansion. Slowing the growth of congestion and delay aids urban travelers’ mobility and productivity and curbs economic inefficiencies induced by congestion. Highly integrated Intelligent Transportation Systems (ITS) use electronic information and communications technology to extend the capacity of our existing infrastructure system, improving traffic flow and reducing bottlenecks.

**Performance Goals:**

Limit the annual growth rate of urban area travel time under congested conditions to no more that 0.3 percentage points.

**Performance Plan:**

**Performance measure:**

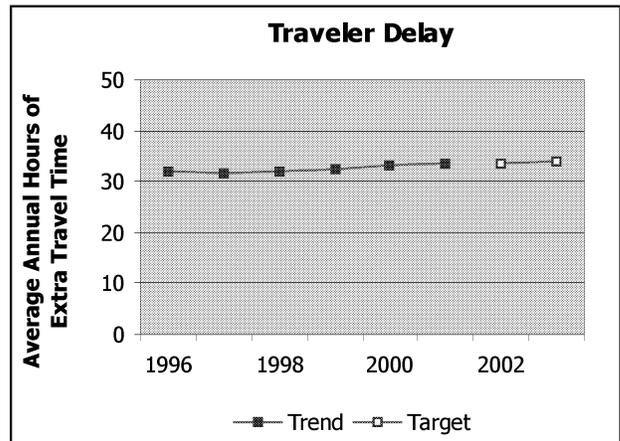
Percentage of total annual urban-area travel that occurs in congested conditions.

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	33.4%	33.7%	34.0%
<b>Actual:</b>	32.6%	33.1%	33.4%#		

# Projection from trends.

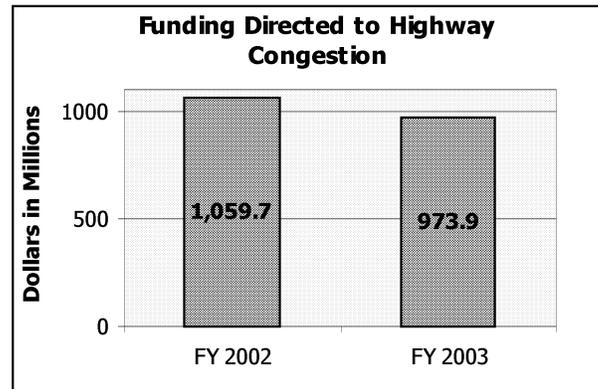
**Note on Data:** The number of metropolitan areas used to derive measures and targets increased from last year. Therefore, both the historical and future data points are slightly different compared to last year’s plan. In addition, factors contributing to delay were expanded this year to include incidents and accidents. The travel time figures from last year reflected delay due to heavy traffic only.

**External Factors:** During the past decade, growth in highway and mass transit systems in the United States did not expand at the same pace as the growth in travel demand. Lane mileage in metropolitan areas – an indicator of road system capacity – has increased at a far slower rate than has highway travel for the past ten years. States and local governments conduct land use planning, and the job creation that comes with economic growth occurs unevenly across the Nation. When job creation happens faster than local transportation planners can adjust local transportation systems, increased congestion is the result.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



DOT employs many programs designed to reduce congestion and improve operations on the Nation’s highway system. In 2003, FHWA will:

- continue to deploy ITS infrastructure by finalizing requirements and initiating testing of a National Highway System infrastructure, conducting courses on ITS architecture and systems engineering and workshops on ITS

standards suites and standards applications, and awarding 80 integration projects.

- work with States to help them improve highway operations and planning.
- increase use of proven technologies and planning practices through education, outreach, and technical assistance. FHWA will work with States to expand collection and use of performance measurement and reliability data for freeways and other major road systems, improve transportation management in small communities, expand use of adaptive control strategies on major urban thoroughfares, provide better information quicker to road users; and better analyze changes in road user "business models".

A major research focus will be on identifying and developing advanced technologies and strategies in communications, monitoring, systems control and information to design next-generation operations systems. Major initiatives will include: initiating an operational test of Adaptive Control Systems; conducting an operational test on the benefits of ITS in work zones; developing analysis tools to support evacuation decision-making; and initiating a Public Safety Mobile Data Interchange operational test.

To improve capabilities for freight analysis, FHWA will develop and disseminate intermodal freight data and analytical tools to assist State and local transportation agencies, and provide training to partners and stakeholders on available freight data and analysis. In addition, FHWA will initiate a major multi-year effort to develop the analytical capability of its partners to plan and implement freight improvements. FHWA will:

- continue to develop an institutional and policy underpinning for freight planning by conducting a scan of U.S. and Latin American freight logistics, and by disseminating benefit/cost tools to State, MPO, and multi-jurisdictional partners and stakeholders for application in intermodal freight transportation planning and decision-making.
- continue support of multi-state coalitions and their efforts to bring regional-level perspective and solutions to freight transportation planning and decision making.
- invest in ITS and infrastructure enhancements such as Commercial Vehicle Information

Systems and Networks. In 2003, DOT will complete integrated ITS deployments in 26 States.

**Other Federal Programs with Common Outcomes:** None.

**Performance Report:**

**FHWA supplementary performance measures\*:**

Of annual urban-area peak period travel time, additional percentage of travel time attributable to congestion.

	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>					
Original:	N/A	N/A	26.6%	27.2%	N/A
Revised:	N/A	N/A	52%	53%	*
<b>Actual:</b>					
Original:	25%	26%#			
Revised:	49%	51%	52%#		

For the individual traveler in urban areas, average annual hours of extra travel time due to delays.

	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>					
Original:	N/A	N/A	33.5	34	N/A
Revised:	N/A	N/A	31.7	32.2	*
<b>Actual:</b>					
Original:	32	33#			
Revised:	30.6(r)	31.2(r)	31.7#		

Number of metropolitan areas where integrated ITS infrastructure is deployed.

	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	N/A	51	56	61	*
<b>Actual:</b>	49	52	52		

*(r) Revised; # Projected from trends.*

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

**2001 Results:** Based on projections, DOT met the three total highway congestion performance targets, but did not meet the ITS deployment target. Because of congested highway conditions, the average peak-period trip took and estimated 51 percent longer than the same trip would have taken in uncongested conditions. Overall, each individual traveler spent an estimated 31.2

additional hours on the highway in 2000 because of congested conditions.

FHWA continued to focus on making the most of existing infrastructure through technology, information access and policy guidance. In conjunction with the DOT ITS Joint Program Office, a final policy on ITS architecture consistency was issued and the FHWA Resource Center and Division Office staffs were briefed on the National ITS Architecture, ITS Standards, and the architecture consistency policy.

With the 511 Deployment Coalition, FHWA developed and distributed guidelines, *511 America's Traveler Information Number: Implementation Guidelines for Launching 511 Services*. As of December, there were 3 active sites and approximately 12 locations in the early adoption or planning stages. FHWA provided 7 States with funds under the 511 Planning Assistance program.

FHWA hosted a National Summit on Transportation Operations, which identified both action items and TEA-21 reauthorization options supporting the advancement of transportation operations for 2002 and beyond. A self-assessment tool was distributed to assist local and State officials in evaluating their operation practices.

FHWA conducted an Evacuation Coordination Operational Test to demonstrate how integrated traffic management can enhance emergency management operations during hurricanes and other large-scale events.

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

**TRANSIT RIDERSHIP:** Public transit offers many benefits. It is one of the safest ways of traveling, relieves road congestion, and avoids air pollution. To achieve these benefits, transit must be convenient and cost-efficient. Federal transit investment combined with State and private sector funds enable this means of transportation.

**Performance Goal:**

Increase transit ridership to improve urban and rural mobility, and reduce traffic congestion.

**Performance Plan:**

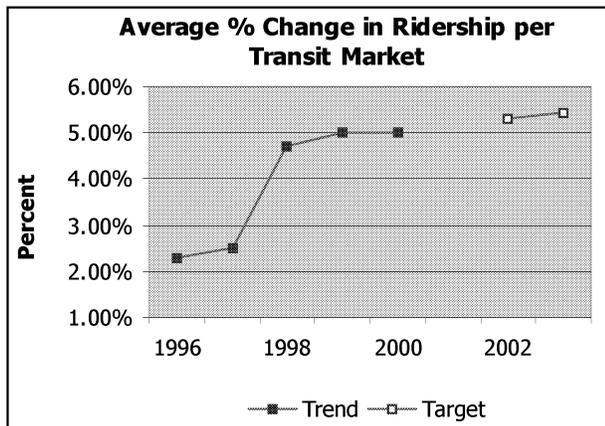
**Performance measures:**

Cumulative average percent change in transit passenger-miles traveled per transit market.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	N/A	5.3%	5.4%
<b>Actual:</b>	5.0%	5.0%	N/A		

Percentage of transit grants obligated within 60 days after submission of a completed application.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	N/A	60%	70%
<b>Actual:</b>	--	21%	51%		

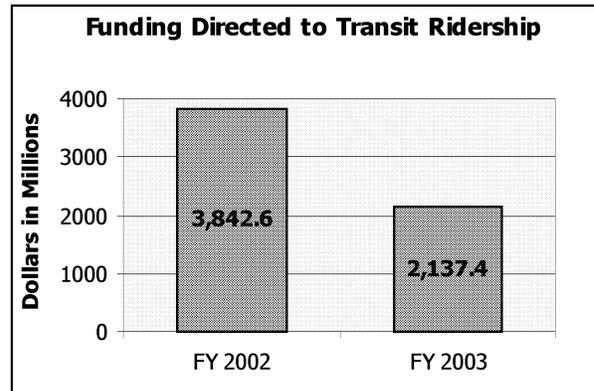
N/A - Not available.

**External Factors:** Communities are spreading farther away from the central cities, and jobs are increasingly located in the suburbs. This creates longer commutes and more scattered travel patterns. Rural areas and small communities are shifting from an agricultural to a service and manufacturing economy, creating a demand for public transportation. As more women enter the labor market, a larger share of workers will need to travel to childcare centers as well as work locations. All these factors will challenge traditional transit systems.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



FTA provides grants to States and localities to develop new transit systems and extend existing systems, and provides transportation planning assistance to ensure that public transit systems are accessible, convenient, and well managed. FTA funds the research and deployment of transit technologies, which increase the reliability of transit, reduce trip time, and improve connectivity between modes. Improvements in reliability and greater access to high-quality transit services attract transit riders. FTA supports the development, deployment and dissemination of information on the bus rapid transit (BRT) technologies, which may reduce travel time and offer low capital cost alternatives to heavy and light rail transit service. FTA sponsors research and tests of innovative technologies such as fuel cells, hybrid electric buses, and alternative fuels that are less polluting than diesel fuels. FTA also works to improve the safety of public transit. All of these efforts implemented in various combinations by the State and local transit agencies encourage increased transit ridership and thus mobility, and support a reduction in congestion and emissions by mobile sources by offering a viable alternative to automobile travel.

In 2003, FTA will:

- invest in transit infrastructure to create new transit services, make transit available to more people in both urbanized and rural areas, and improve the condition of current transit services;
- provide \$73 million to Metropolitan Planning Organizations and State DOTs for planning activities to ensure that new transit services are accessible, convenient, and well managed; and
- conduct research to improve train control systems and fleet management, and to attract riders; and
- insure that grant applicants know how to get applications completed correctly the first time, and reach rapid decisions on applications received.

**Other Federal Programs with Common Outcomes:** DOT coordinates transportation, housing, economic development and environmental programs with several other Federal agencies. DOT and the Department of Health and Human Services jointly encourage local Medicare agencies to use regularly scheduled transit service for medical appointments in lieu of more expensive, specialized transportation. DOT and the Environmental Protection Agency jointly promote the Commuter Choice initiative that mitigates congestion and encourages transit use, and implement joint transportation planning and environmental guidance.

**Performance Report:**

**FTA supplementary performance measure\*:**

Passenger-miles traveled (in billions) by transit.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	---	40.56	44.8	47.5	*
<b>Actual:</b>	43.3	45.1(r)	46.3		

*\* 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 the performance target.

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

**Management Challenge – Transit Grant Oversight (IG/GAO/OMB)**

DOT grants to States and localities are a key tool to expand transit ridership. Oversight of these grants is a core management responsibility of FTA, and the IG, GAO, and OMB have identified ways to improve oversight. Over the past several years, FTA has worked to continuously improve its grants management by implementing better oversight activities and exercising full use of available enforcement tools to correct grantees' noncompliance with Federal regulations. As a result, FTA is reducing the risk associated with its grants program.

2001 and following:

FTA will use its project management oversight contractors (PMOC) to provide monthly reports on all phases of construction of transit projects. Tracking project contract changes and costs, and implementing measures to control cost will remain part of the PMOC responsibility.

To improve grantee compliance with statutory and administrative requirements, FTA will:

- Reduce by five percent per year the deficiency findings per triennial and State management oversight review. (FY 1998 baseline is an average of 3.2 deficiencies per review for triennial reviews and 6.9 deficiencies per review for State management reviews.) In 2001, an average of 8 deficiencies were found in triennial reviews, FTA's target for 2001 was 2.7 deficiencies per review. For State management reviews, FTA found an average of 6 deficiencies per review, only slightly above the reduction target of 5.92 deficiencies per review.
- Reduce by five percent per year the deficiency findings per financial management and procurement review. (FY 1998 baseline is an average of 10.5 findings per review.) In 2001, an average of 4.42 deficiencies were found in financial management reviews; the target for 2001 was 9.0 deficiencies per review. For procurement reviews, in 2000 FTA found an average of 8.5 deficiencies per review, slightly above the reduction target of 8.1 per review. (2001 procurement system review data not yet available.)

**AVIATION DELAY:** Commercial aviation delays are estimated to cost airlines over \$3 billion per year. Passengers are directly affected by missed flight connections, missed meetings, and loss of personal time. There are approximately 20 congested airports, each averaging over 20,000 hours of flight delay per year. Delays throughout the system are projected to increase as passenger travel demand continues to recover and rise.

**Performance Goal:**

DOT seeks to add aviation system capacity at a rate that matches demand, so that on-time arrival performance improves by one percentage point per year.

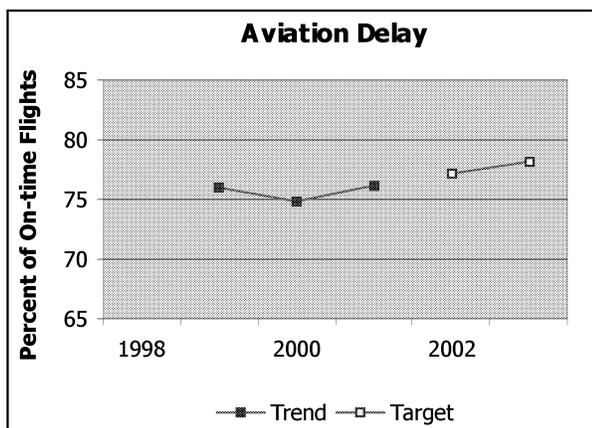
**Performance Plan:**

**Performance measure:**

Percent of on-time flights.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	N/A	77.2%	78.2%
<b>Actual:</b>	76%	74.9%	76.2%		

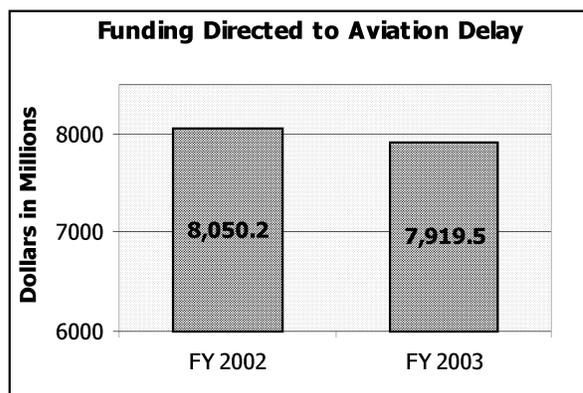
**Note on data:** The airlines, FAA and Bureau of Transportation Statistics have all agreed to use the percentage of flights arriving on time (within 15 minutes of scheduled arrival time) as a common measure of aviation delay.

**External Factors:** Delays throughout the National Airspace System (NAS) are generally the result of air traffic density and adverse weather. As traffic increases throughout the system, delays are likely to increase. Decisions by air carriers to concentrate operations in one or more hub airports, changing consumer demand for air travel, rapid population growth in urban centers, physical configurations of airports and terminals, and environmental considerations can either saturate or limit the ability to move aircraft to and from airports, and through congested airspace. Security induced flight delays may prove to be a significant variable.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



FAA's service improvements designed to reduce delays will focus in four inter-related areas:

- working with airlines and airports in planning airlines' operations at congested hubs;
- airspace system modernization and shortening the time it takes to approve plans and build additional runways;
- insertion of specific technologies to improve airspace throughput capacity; and
- improved information and decision making processes.

Capacity benchmarks and joint FAA-airline flight decision-making combine to optimize flight scheduling at busiest air hubs:

FAA developed capacity benchmarks for 31 of the busiest U.S. airports to provide individual measures of peak capacity. Comparing actual aircraft handled to capacity benchmarks provides FAA with a measure of their efficiency in handling aircraft and information about how well FAA is preventing delays. Joint FAA-airline decision-making on flight movements allows a cost-effective approach to be taken in coping with weather and other delays. Airlines can provide

their preferences for routing and departure order of aircraft, so that the impact of delays can be minimized.

Technology insertion and enhanced information tools:

FAA will continue installing air traffic automation enhancements such as the Traffic Management Advisor (TMA) at up to twelve Air Route Traffic Control Centers serving the major hubs, and complete the implementation of the passive Final Approach Spacing Tool (pFAST) at Terminal Radar Approach Control centers located at Dallas-Ft. Worth, Los Angeles, Atlanta, Minneapolis, New York—JFK, and Newark. Both TMA and pFAST are used by controllers and air traffic managers to minimize delays for airport arrivals.

FAA is installing and improving two major systems to improve weather reporting, processing, and dissemination. The Integrated Terminal Weather System (ITWS) consolidates information from several sources, which will then be provided to airport towers to assist in managing weather delays. The Weather and Radar Processor (WARP) will report weather information and integrate weather radar data provided to the FAA centers to provide efficient routing of aircraft. FAA is continuing to implement and improve existing weather sensors such as Next Generation Weather Radar (NEXRAD), Terminal Doppler Weather Radar (TDWR), the Low Level Wind Shear Alert System, a wind shear detection channel for the terminal radar, and the Automated Surface Observation System (ASOS).

FAA has implemented and is evaluating an experimental demonstration program called Collaborative Convective Forecast Product (CCFP) at the Air Traffic Control System Command Center (ATCSCC). The CCFP provides a single forecast of thunderstorm and severe weather phenomenon, so NAS users can coordinate a system-wide approach to severe weather events. The FAA and the NAS operators have agreed to adopt the CCFP as the official forecast tool for planning purposes.

Operational process improvements and airspace redesign: As part of its collaborative efforts to reduce delays, the FAA has created a special data system, Aviation System Performance Metrics (ASPM), to provide metrics comparing actual versus scheduled performance by the phase of a flight. ASPM data contain, among other things, actual and scheduled arrivals and departures by

air carriers by airport, and the actual acceptance and departure rates by airport. The acceptance and departure rates reflect the arrivals and departures that can occur, based on standard air traffic management practices. The best employment of available ground resources (e.g., airport runways and taxiways, landing and take-off procedures, and air traffic personnel and equipment) will result in the highest available airport efficiency rates.

FAA is redirecting a major portion of its organization - 37,300 employees - into a results-oriented Air Traffic Organization (ATO), freeing most of the FAA to manage better, and modernize faster and more efficiently.

**Other Federal Programs with Common Outcomes:** NASA has developed enhanced software tools for air traffic control in partnership with the FAA.

The National Weather Service (NWS) has developed the Collaborative Convective Forecast Product. This product is utilized several times each day to forecast significant meteorological disturbances that could affect traffic flow.

**Performance Report:**

**FAA supplementary performance measures\*:**

Aviation delays per 100,000 activities.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	N/A	171	171	*	*
<b>Actual:</b>	220	250	254		

Cumulative increase in throughput during peak periods at certain major airports.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	N/A	N/A	3%	*	*
<b>Actual:</b>	N/A	N/A	3.4%		

Cumulative increase in direct routings for en route flight phase.					
	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	N/A	N/A	15%	*	*
<b>Actual:</b>	N/A	N/A	23.4%		

Percent of runways in good or fair condition (commercial service, reliever, and selected general aviation airports).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	93%	93%	93%	*	*
<b>Actual:</b>	95%	95%	95.8%		

Total number of runways accessible in low visibility.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	1,191	*	*
<b>Actual:</b>	1,084	1,109	1,229		

\* After 2001, air traffic system capacity and air traffic system efficiency goals will be operating administration performance goals and will continue to be tracked by FAA. Results will be discussed in the context of this performance goal.

**2001 Results:** FAA met the throughput at certain major airports, en route direct routings, runway pavement condition, and runway low visibility access performance targets, but did not meet the aviation delay performance target.

The delay rate declined in six of the last seven months, and the total number of delays declined about 1.5%. Delays are concentrated primarily for flights serving several large hubs. While throughput and direct routings at certain airports may have increased, the airports used for the demonstration programs are not those where there are large numbers of delays. In addition, runway pavement is maintained at such a high level it is seldom a cause of delay, while increases in the number of vertically guided approaches again tend to benefit smaller airports that do not generally have delay problems.

Again this year, weather accounted for about 70% of all delays - Over 176 delays per 100,000 activities, but 1.5% less than in 2000. August 2001 was the highest weather delay month, accounting for over 13% of the total weather delay for the year. Reduced demand caused by the events of September 11, 2001 likely reduced September delays. Over 4.5 delays per 100,000 activities were due to equipment failure in FY 2001. This represents an increase of 1.54 delays per 100,000 activities over FY 2000. The National Operations Control Center (NOCC) will continue to collaborate daily with Traffic Management to

ensure NAS equipment services is available for use.

Volume delays increased by 5% over 2000. Delays during October and November exceeded 63 delays per 100,000 and significantly impacted the overall outcome for the year. LaGuardia airport, which accounted for nearly two-thirds of all volume delays in the first two months of the fiscal year, accounted for only about 10 percent of volume delays in the last two months of the year due to actions taken by DOT, FAA, Port Authority of New York, and system users.

“Other” delays, at about 36 per 100,000 activities, are down from about 39 per 100,000 activities in FY 2000. Runway construction at Houston and LaGuardia and the unavailability of Land and Hold Short Operations (LAHSO) at several airports have added to delays.

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

**Management Challenge – Aviation System Capacity and Air Traffic Control Modernization (IG/GAO)**

The FAA is engaged in a comprehensive program to modernize the air traffic control system. This includes replacement of the controller workstations and automation software; replacement of radar surveillance systems; modernization of voice communication systems; and the introduction of enhanced automation aids, data link, and improved weather systems. This modernization is necessary to keep pace with improvements in technology and to accommodate air traffic growth. There are significant management challenges associated with maintaining schedule and cost discipline, given the complex nature of the equipment and the need for the highest level of reliability, and in ensuring efficient and timely use of airport grant funds.

The Operational Evolution Plan (OEP) defines the FAA's commitment to implement capacity increasing enhancements within the NAS. Management of these efforts builds upon successful Free Flight program techniques that integrate well-defined operational concepts, early deployment, spiral development, and objective, measurable results. Through Radio Technical Communication Association (RTCA), the OEP efforts are synchronized with industry so that FAA

investment yields timely benefits. Responsibility for delivery of each new capability is assigned to a single senior executive who coordinates both acquisition and operational integration performance. The performance metrics for OEP projects map directly to organizational measures. This linkage ensures that resources are properly aligned with the FAA's commitment to increasing capacity.

The DOT IG reported that as of Sept. 2001, FAA had 62,000 obligations, totaling about \$200 million that had no expenditures within 18 months. The IG's review of 320 inactive obligations identified \$45 million that no longer represented valid liabilities. FAA will work with grantees to ensure that unused funds associated with completed, cancelled, or unnecessary airway or airport projects are put to good use, by working to reduce the dollar value of inactive obligations for aviation projects by 10 percent per year.

**MARITIME NAVIGATION:** More than two billion tons of freight worth \$1 trillion annually moves through U.S. ports and waterways. The St. Lawrence Seaway is the international shipping gateway to the Great Lakes, offering access and competitive costs with other routes and modes to the interior of the country. As trade increases, ensuring safe and unimpeded access to commercial and recreational vessel traffic will be increasingly important to the national economy. Navigational accidents and ice-choked shipping channels impact freight movements and increase the risk of environmental damage. Extending shipping routes in winter is crucial for many industries and for Northeastern U.S. home heating oil shipments where other transportation alternatives do not exist.

**Performance Goal:**

Reduce the amount of disruption to maritime commerce caused by marine accidents, and other impediments to around-the-clock, all weather navigation.

**Performance Plan:**

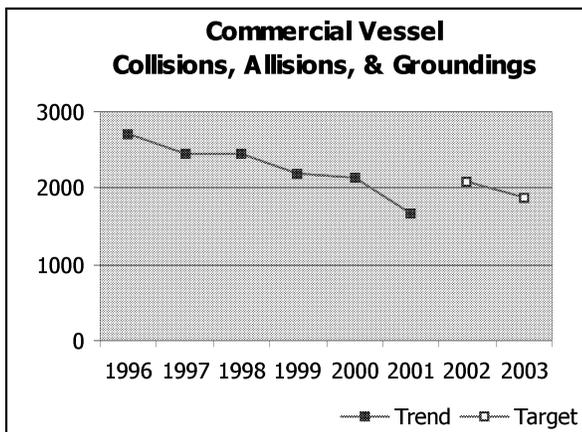
**Performance measures:**

Total number of commercial vessel collisions, allisions, and groundings.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	2,204	2,098	1,878
<b>Actual:</b>	2,194(r)	2,152(r)	1,677#		

Percentage of days in the shipping season that the U.S. portion of the St. Lawrence Seaway system is available.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	99%	99%	99%	99%	99%
<b>Actual:</b>	99.2%	98.7%	98.3%		

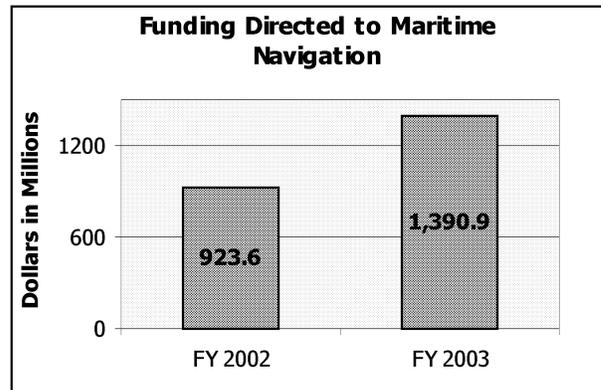
(r) Revised; # Preliminary estimate.

**External Factors:** Waterway disruptions caused by collisions, allisions and groundings are strongly affected by human error on the part of those piloting the ships. Faster, larger, deeper draft vessels will pose a greater risk of navigational accidents.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



The Coast Guard operates and maintains a national aids to navigation (ATON) system and provides Ports and Waterways Safety Systems (PAWSS) in select ports. The Coast Guard also develops national and international standards for vessel navigation, manning, and crew qualifications, and enforces these standards.

MARAD acts as a catalyst to stimulate cooperative ventures and partnerships among the marine freight industry's public and private sectors to adapt new technologies and intermodal networks. These efforts will increase capacity in container ports to meet expected long-term increases in demand, including introduction of marine-rail intermodal systems with potential to double or triple existing port throughput capacity. Such a marine-rail interface project is being demonstrated at the Port of Tacoma in FY 2002.

Reducing human error will be the Coast Guard's major focus. The Coast Guard will also manage higher risk waterways using Vessel Traffic Services (VTS).

The Coast Guard will continue its effort to prevent accidents by developing navigation standards and providing navigation information and vessel traffic services to the maritime industry. It will respond to accidents to ensure minimal disruption to the transportation system. Finally, the Coast Guard will investigate accidents and work with its industry partners using the lessons learned to improve the ports and waterways safety, while at the same time facilitating commerce.

The Coast Guard will continue to put vessel horsepower restrictions in place, on an as needed basis, until ice conditions moderate. The Canadian and U.S. Coast Guards will also work closely with one another to provide icebreaking services on the Great Lakes where needed. Modifications to East Coast coastal buoy tenders have been made to minimize problems with engines overheating while operating in brash ice.

SLSDC will continue to focus on increasing the safety, security, reliability, and efficiency of the U.S. navigation facilities each shipping season, reducing the risk of vessel delays due to lock equipment failure, and improving maintenance and inspection systems. Specifically the SLSDC will:

- emphasize periodic inspections and surveys of locks and machinery, and implement lock structure improvement programs as recommended by the U.S. Army Corps of Engineers during the annual winter maintenance program.
- continue coordination with its Canadian counterpart agency to ensure consistency in the vessel inspection procedures of the two agencies and implement joint projects aimed at improving the safety and efficiency of the waterway and the two Seaway agencies.
- Use electronic navigation technologies to more efficiently manage vessel traffic control.

**Other Federal Programs with Common Outcomes:** The Coast Guard investigates marine accidents, and works with the National Transportation Safety Board (NTSB) to investigate major maritime accidents. The Coast Guard and SLSDC coordinate with the Army Corps of Engineers on general navigation and mobility issues. The Army Corps of Engineers dredges channels to maintain charted depth and width; and both the Corps and the Department of

Commerce (NOAA) provide navigation charts of U.S. ports and waterways. NOAA provides real-time environmental information on weather, tides, and currents to ships maneuvering in the Nation's waterways.

The Canadian St. Lawrence Seaway Management Corporation carries out counterpart programs. The SLSDC engages in information exchanges with the U.S. Army Corps of Engineers, which operates locks on U.S. inland waterways, and closely coordinates with Transport Canada, and with the International Joint Commission and St. Lawrence Seaway River Board of Control regarding water level conditions. The U.S. and Canadian Coast Guards coordinate icebreaking operations in the Great Lakes.

**Performance Report:**

**USCG supplementary performance measure\*:**

Days critical waterways are closed due to ice. (2 days in an average winter; 8 days in a severe winter.)					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	2-8	2-8	2-8	2-8	*
<b>Actual:</b>	0	0	7#		

# The winter of 2000-2001 was classified as a severe winter.

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

**2001 Results:** DOT met the ship collision, allision and grounding, and waterway ice closures targets, but did not meet the St. Lawrence Seaway measure. Collisions, allisions and groundings are on the decline, resulting in significantly lower traffic disruptions in 2001. 47% of all waterway incidents were groundings, 32% were allisions, 15% were collisions and the remaining 6% were due to equipment failure, breakaways, pollution, sinking, fire, flooding, and structural failure. 39% of all collision, allisions and groundings involved barges.

Western Lake Erie and the lower Detroit River were closed for 7 days last year during a six-week period of severe winter. Icebreaking services kept commerce moving all season last year in New England.

Early ice formation on the Great Lakes caused significant traffic disruption in December 2000. Vessels in Western Lake Erie were beset, and over the four-month ice season, icebreakers assisted 543 vessels. Heavy ice concentrations resulted in implementation of one-way traffic schemes, waterway closures, and convoy operations. Coal at Canadian electrical generating stations was critically low, requiring more than 8 millions tons of coal to be shipped late into the shipping season.

In the Northeast, icebreakers kept commerce moving throughout the winter. In some areas, the Captain of the Port put vessels with lower propulsion power under movement restrictions until ice conditions moderated. Only three critical waterways were afflicted with ice conditions serious enough to require icebreaking services.

During the St. Lawrence Seaway's 2001 navigation season, the availability of the U.S. sectors of the Seaway, including the two U.S. locks maintained and operated by the Saint Lawrence Seaway Development Corporation (SLSDC) was 98.3 percent. This result was slightly below the target of 99 percent.

An analysis of the factors that caused system non-availabilities in 2001 indicates that the most common cause was weather (56.8 hours, or 51 percent of total non-availability). These weather delays usually occur at the beginning and end of each navigation season, and are caused by poor visibility, high winds, ice, blizzards, and dense fog. The other major factor that reduced lock availability in 2001 was vessel incidents (45.1 hours, or 41 percent of total non-availability). Vessel incidents involve ship operations, and are usually caused by human error on the part of a vessel's crew. Also included as incidents are vessel breakdowns, which are caused by mechanical problems with a vessel.

While none of these factors is directly under the control of the SLSDC, SLSDC is addressing them by joining with the Canadian St. Lawrence Seaway Management Corporation and the U.S. and Canadian Coast Guards, to institute a joint boarding program for the foreign vessels that use the Seaway. This vessel inspection program was certified as ISO 9002 compliant in 1998. In 2001, the SLSDC continued this program by inspecting 100 percent of all ocean vessels in Montreal. This improved inspection regime has saved vessels, on

average, four hours per transit and ensured that any safety or environmental issues are addressed prior to entering U.S. waters. As a result, delays were reduced and ocean carriers using the Seaway saved more than \$500,000 in operating costs during the 2001 season.

The SLSDC is also developing an Automatic Identification System (AIS)-based Vessel Traffic Management System (TMS) that is based on Global Positioning System (GPS) technology. The application of Universal AIS technology should enhance the efficiency of Seaway operations, improve the safety of navigation on the Seaway, and reduce vessel incidents when it is implemented during the 2002 navigation season.

Of the remaining factors that cause lockage shutdowns, the Corporation has the most control over the proper functioning of lock equipment. During the 2001 navigation season, only 6.9 hours of the 110.8 total hours of downtime (6 percent) were due to malfunctioning lock equipment.

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

**TRANSPORTATION ACCESSIBILITY:** Transportation is vital in maintaining independence and mobility for people with disabilities, linking them to employment, health care, and participation in the community. The President’s New Freedom initiative seeks to create a more accessible public transportation system for individuals with disabilities. The Personal Responsibility and Work Opportunity Reconciliation Act limits the time a person can receive welfare benefits, and generally requires recipients to participate in job and training activities. For many of these people, access to transportation is the key to making a transition from welfare to work. Public transit helps connect our lower income population to employment.

**Performance Goal:**

Increase the accessibility of public transit systems to those with disabilities.

Increase mass transportation systems’ ability to provide access to job sites.

**Performance Plan:**

**Performance measures:**

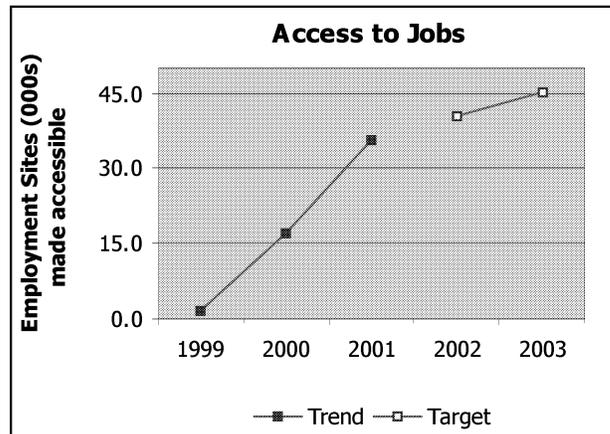
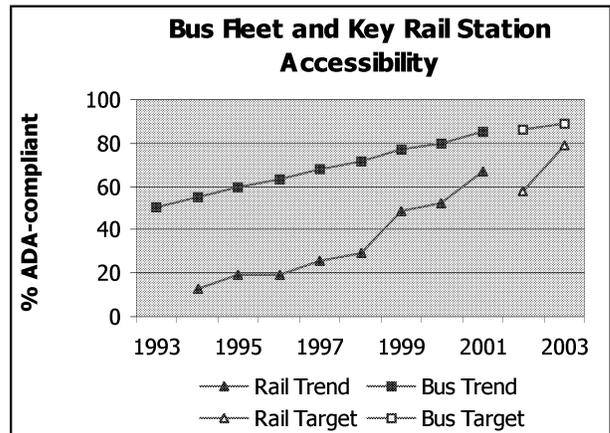
Percentage of bus fleets that are ADA-compliant.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	73%	80%	83%	86%	89%
<b>Actual:</b>	77%	80%	85%		

Percentage of key rail stations that are ADA-compliant.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	37%	47%	58%	68%	79%
<b>Actual:</b>	49%	52%	67%#		

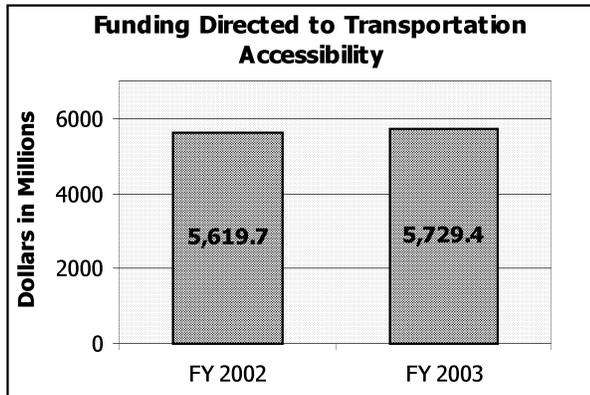
Number of employment sites (000s) that are made accessible by Job Access and Reverse Commute (JARC) transportation services.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	4.1	15.7	40.4	45.4
<b>Actual:</b>	1.7	17.0(r)	35.7#*		

(r) Revised. # Preliminary estimate; \* does not reflect stations under a time extension as discussed below.

**External Factors:** As the population ages, more people will require accessible public transit. States and local agencies decide how to best allocate federally provided resources to ensure ADA compliance.



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



FTA provides grants to help local transit operators meet the requirements of ADA and assess compliance at rail stations, which are then self-certified as compliant with ADA requirements. FHWA, FTA and other DOT organizations also work to improve the accessibility of other modes of transportation. FTA also provides grants to State and local governments and non-profit organizations representing the disabled, Native Americans, migrant workers, welfare recipients, and low-income individuals to create new and expanded transit services. The services are intended to move people from their homes to employment sites and other employment-related services, such as child-care and job training. Grants also support services that provide access to suburban employment sites.

FHWA will administer over \$1.5 billion in Congestion Management and Air Quality (CMAQ) funding. The CMAQ program is the major source of federal highway funds transferred to FTA for transit subsidies and other transit programs. Surface Transportation Program funds may also be used for transit purposes.

RSPA will guarantee critical and timely transportation services during natural and man-made disasters and national security crises.

In 2003,

- The President's New Freedom Initiative (\$145 million) will help to ensure transportation alternatives for Americans with disabilities. \$100 million in competitive matching grants to promote alternative transportation methods, including the purchase and operation of specialty vans and accessible vehicles. In addition, a pilot project program will make \$45 million available for innovative

approaches to overcoming transportation barriers faced by persons with disabilities.

- FTA's Formula Grants for Special Needs of Elderly Individuals and Individuals with Disabilities will provide funds to make transit more accessible (\$87 million). Funds provided by other Formula Grants, Capital Investment Grants, and Job Access and Reverse Commute Grants may also be used to buy new vehicles and facilities that are ADA compliant.
- FTA will continue to review grantee compliance with ADA. (\$0.6 million)
- FTA's Project ACTION will conduct research, develop technology, and provide technical assistance to transit operators providing accessible service. (\$3 million)
- FTA's Rural Transportation Accessibility Incentive Program will help operators of over-the-road buses finance ADA compliance. (\$0.75 million)
- FTA's Job Access and Reverse Commute program will provide grants to help implement new transportation services and continue existing service linking welfare recipients to jobs. (\$150 million)

**Other Federal Programs with Common Outcomes:** DOT participates in the DOT-HHS Coordinating Council with the Department of Health and Human Services. DOT develops transportation strategies to meet the needs of elderly and disabled people, and HHS ensures that its services are accessible to its clients. Helping people move from welfare to work is a goal shared by HUD's Bridges to Work, DOL's Welfare to Work (WTW), and HHS's Temporary Assistance to Needy Families (TANF) programs. Federal funds from these Departments may be used as part of the local match to DOT's Job Access grants and other non-DOT Federal aid. DOL and HHS have increased the scope and flexibility with which both WTW and TANF funds can be used for transportation purposes. Not only may these funds be used to fund clients' trips, but also these funds may now be used to fund new and expanded transportation services similar to the Job Access and Reverse Commute Program. Individual family reporting requirements and benefit time limits do not apply when WTW and

TANF funds are used for new and expanded transportation service development.

**Performance Report:**

**2001 Results:** DOT met all performance targets. The rail station compliance increased 15% from last year, and DOT far surpassed the job site access target.

The bus transit fleet continues to become more accessible as older vehicles are replaced with those that are lift equipped or have low floors. The overall rate of increase in bus accessibility has slowed somewhat since many of the buses being replaced were already lift-equipped.

There are a total of 685 key rail stations nationwide at 33 transit properties. "Key stations" are designated by the commuter authority or light/rapid rail operator in cooperation with the local disability community. Criteria for identifying key stations include the number of passenger boardings, whether or not the station is a transfer station, a major interchange point, or an end station, and whether the station serves major activity centers.

Time Extensions, as authorized by 49 CFR 37.47 (c)(2) permitted the FTA Administrator to grant an extension of the July 26, 1993, completion date for key station accessibility up to July 26, 2020 for stations requiring extraordinarily expensive structural modifications (e.g., installation of elevators, raising entire passenger platforms, or alterations of similar magnitude and cost). There are a total of 138 key stations currently under Time Extensions. For those stations not meeting the statutory requirements for the granting of Time Extensions, but still needing extra assistance, Voluntary Compliance Agreements (VCA) were established. VCA's are written agreements between FTA and grantees, whereby grant recipients commit to schedules and milestones to reach compliance. Failure to meet agreed upon schedules and milestones, along with a determination of the lack of good faith, can result in referral to the Department of Justice for enforcement.

The most important aspect of ADA rail oversight is key station assessments. Since 1995, FTA has assessed more than 485 stations. FTA employees take on-site measurements, record specific accessibility features at stations, and simultaneously provide technical assistance.

Assessments ensure that stations certified as ADA-compliant remain in compliance with current standards.

Voluntary Compliance Agreements (VCA), establishing quarterly key rail station status reports, and key rail station assessments have significantly increased the number of fully compliant key rail stations over the last several years.

FTA continued to fund Job Access and Revers Commute grant requests that were submitted in FY 2000 as well as Congressionally-designated projects in FY 2001. FTA approved 148 Job Access grants and amendments for \$85.6 million. In addition, FTA granted applicants pre-award funding authority to permit the selected applicants to start proposed services while their final applications were being processed. FTA also set reporting requirements to obtain information on the stated performance measures of reaching new job sites and on service effectiveness and efficiency. This information is to be reported in each grantee's quarterly progress report that is required once FTA obligates grant funding.

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

**INTERNATIONAL AIR SERVICE:** Since the 1940's international air transportation has been subject to restrictive bilateral agreements that raise prices and artificially suppress aviation growth. DOT's policy is to negotiate bilateral agreements to open international air travel to market forces, thereby removing limitations on the freedom of U.S. and foreign airlines to increase service, lower fares, and promote economic growth. These agreements have made it possible for the airline industry to provide better quality, lower priced, more competitive service for millions of passengers in thousands of international city-pair markets.

**Performance Goal:**

Increase the number of countries with which the United States has "open-skies" agreements and to increase the number of passengers that benefit from these agreements.

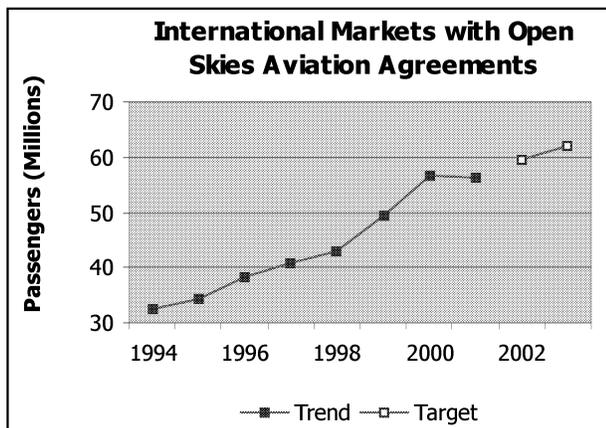
**Performance Plan:**

**Performance measure:**

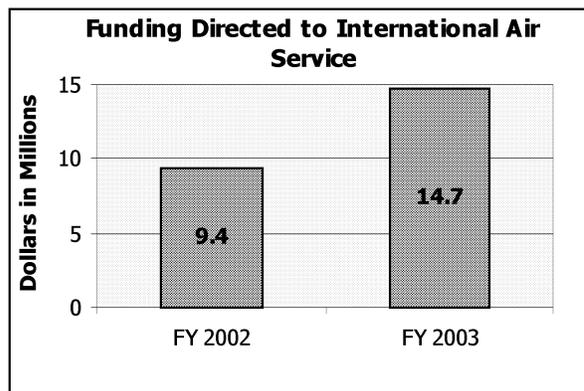
Number of passengers (in millions) in international markets with open skies aviation agreements.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	43.4	44.7	51.6	59.7	62.1
<b>Actual:</b>	49.4	56.8(r)	56.2#		

(r) Revised; Preliminary estimate

**External Factors:** Agreements to foster greater access are negotiated on a nation-by-nation basis, and must balance conflicting interests. Negotiating agreements and achieving passenger growth goals may be influenced by the strength of the world's economy and by regional economic cycles.



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



The domestic airline industry continues to undergo major changes, and international deregulation, which poses even more complex and controversial issues, is barely underway. Common to all of the aviation issues currently facing DOT is the need for in-depth and intensive analysis of practices, mergers, and international alliances. As the United States moves towards a multilateral approach to air service agreements, an understanding of long-term trends in the airline industry's operating and competitive structures is required to formulate and execute effective negotiating strategies to ensure pro-competitive liberalization.

Additional staff in 2003 will help build a strong core of experienced analysts having broad policy backgrounds and capable of using sophisticated analytical tools to meet these challenges.

**Other Federal Programs with Common Outcomes:** The Department of State works with DOT in negotiations that support the U.S. goal of international aviation trade liberalization.

**Performance Report:**

**2001 Results:** DOT met the performance target. DOT added seven new open-skies agreements –

with Morocco, Rwanda, Malta, Benin, Senegal, Poland and Oman. By the end of FY2001, 54 nations had agreed to open-skies with the United States. In addition, the United States has an “open-transborder” agreement with Canada.

**FY 2002 Performance Plan Evaluation:** DOT anticipates meeting the 2002 target.

**ESSENTIAL AIR SERVICE:** Under the EAS program, the Department subsidizes an air carrier to provide scheduled air service only if no carrier is willing to provide the service subsidy-free. Communities in the continental United States, Hawaii, Puerto Rico, and the U.S. territories (“non-Alaska”) receive subsidized air service, and 32 more in Alaska. Service needs at the Alaskan communities are unique, are determined on a case-by-case basis, include cargo as well as passengers, and thus are difficult to measure.

**Performance Report:**

**Discontinued performance measures:**

Percent of subsidized communities with at least 3 round trips/day, 6 days/week (18 round trips/week).

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	75%	75%	75%	*	*
<b>Actual:</b>	78%	77%	78%		

Percent of subsidized communities with at least 2 round trips/day, 6 days/week (12 round trips/week).

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	100%	100%	100%	*	*
<b>Actual:</b>	100%	100%	100%		

(r) Revised.

*\* Since the terrorist events of September 11<sup>th</sup>, the Essential Air Service program has changed significantly. Funding has more than doubled, and the baseline program is likely to change for some time. Therefore, the performance measure was discontinued after 2001.*

**External Factors:** The backbone of the EAS program for the past decade has been pressurized 19-seat aircraft. For a number of reasons, this aircraft size is being phased out of many airlines’ fleets and being replaced with larger, more costly aircraft.

**2001 Results:** DOT met both performance targets. 81 communities received subsidized air service out of the 500+ non-Alaskan eligible communities. Sixty-three of those 81 received at least three round trips/day, six days a week. Industry practice is that more than two round trips/day are needed to maintain a viable market. 78% of the subsidized communities receive the higher level of service.

In FY 2001, out of the EAS Program’s \$50 million annual budget, contracts totaling \$49 million were entered into with air carriers to provide essential

air service at 113 communities in the United States and its territories. DOT also contacted other carriers to alert them to the market opportunity opening up whenever an existing carrier reduced or eliminated service to an eligible community.

**Other Federal Programs with Common Outcomes:** None.

**COMMERCIAL SHIPBUILDING:** Like other industries that in the past depended upon defense contracting, U.S. shipyards need to maintain economic viability through commercial production.

**Performance Report:**

**Discontinued performance measure:**

Gross tonnage (in thousands) of commercial vessels on order or under construction in U.S. shipyards.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	510	520	530	*	*
<b>Actual:</b>	595(r)	1,100	1,162#		

(r) Revised; # Preliminary estimate.

\* The President's Budget requests no funding other than program administration funds in FY 2003. These funds will be used by MARAD to administer unobligated prior year funding balances, and take aggressive action to minimize future loan defaults by entities holding loans guaranteed under the Title XI program. Therefore, this performance measure was discontinued after 2001 but will continue to be tracked by MARAD.

**External Factors:** The ongoing consolidation within the U.S. shipbuilding industry and corporate decisions by U.S. shipyards to focus on military ship construction could significantly reduce commercial ship production.

**2001 Results:** DOT met the performance target.

**Other Federal Programs with Common Outcomes:** The U.S. Trade Representative (USTR) and the Department of State along with other Government agencies work to end trade-distorting practices and open international markets for U.S. shipyards. Through the National Shipbuilding Research Program - American Shipbuilding Enterprise, the Naval Sea Systems Command assists the shipbuilding industry in developing modern shipbuilding processes and procedures.

***Management Challenge: Reducing DOT Liabilities for Title XI Ship Construction Loan Defaults (IG)***

The DOT IG has stated that DOT should act to protect the Government's interests and seek to stop the recent increase in Title XI ship construction loan defaults.

In order to administer the Title XI program more effectively with the presently available resources and to minimize the risk of defaults, MARAD is considering changes to program requirements. MARAD will evaluate these potential changes in conjunction with any changes that may be recommended by the DOT IG after completion of the IG's currently ongoing Title XI program review.

**TRANSPORTATION AND EDUCATION:** Many Federal programs work to foster an educated, innovative, and highly skilled transportation workforce in the 21st Century. Such a workforce is needed to enable the U.S. to compete effectively in the global economy, and provide its people with a safe, efficient transportation system.

**Performance Report:**

**Discontinued performance measures:**

Number of students graduating with transportation-related advanced degrees from universities receiving DOT funding.

	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	N/A	1,046	1,203	*	*
<b>Actual:</b>	1,086	1,154	1,160#		

Cumulative number of students (in thousands) reached through the Garrett A. Morgan Technology and Transportation Futures Program.

	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>
<b>Target:</b>	650	3,000	5,000	*	*
<b>Actual:</b>	1,502	3,000	N/A		

# Preliminary estimate; N/A Not available.

\* After 2001, the first goal above will be an operating administration performance goal and will continue to be jointly tracked by FHWA, FTA, and RSPA. The second performance goal has been completed, and is therefore discontinued. Data collection issues described below make this performance goal untenable.

**FY 2001 Results:** Data are incomplete. Seven of 33 University Transportation Centers (UTC) have not yet reported their final annual data due to various factors, including: late-year grant funding cycles, and revisions currently being made to final data. For those UTCs not yet reporting, the prior year's data were used. The actual total once all UTCs have reported is expected to be higher than the current incomplete total of 1,160 students.

**AMTRAK RIDERSHIP:** Intercity rail passenger service benefits Americans by providing a transportation alternative to air or automobile travel, and thereby helps to reduce congestion, improve air quality, and decrease energy consumption. Amtrak has not been able to cover its operating and capital costs effectively even with substantial Federal subsidies.

**Performance Report:**

**Discontinued performance measure:**

Intercity ridership (millions of passengers).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	23.7	25.3	*	*
<b>Actual:</b>	21.5	22.5	23.5		

*\* Due to the ongoing policy review of intercity passenger rail service, this performance goal is discontinued after 2001.*

**External Factors:** Amtrak is a for-profit corporation, and outside the Northeast Corridor, commercial railroads own both rights-of-way and operating systems. This can create problems in achieving on-time performance (and customer satisfaction) on lines congested by freight trains.

**2001 Results:** DOT did not meet the performance target.

Excluding State subsidies and other Federal and State payments, Amtrak has made very little progress in improving the economics of its core passenger and allied businesses since the mid-1990s. From 1994 through 2000, the net constant-dollar reduction in the annual operating deficit for Amtrak’s “core business” amounted to about \$100 million - compared with an annual deficit in the range of \$600 to \$700 million during that period. Amtrak’s diversification of its revenue base has not had any appreciable impact on the corporate cash loss since 1995.

On a constant dollar basis, the cost to generate each passenger-mile on Amtrak has grown by about 17 percent since 1994 – or about 2½% per year – thus counterbalancing any benefit from increased revenues. Trends for the expense and revenue increases are parallel rather than converging. Had expense increases been held to inflation from 1994 to the present, the system-wide deficit per passenger-mile would be only 7½ cents, almost half the 13½ cents that Amtrak presently generates; and the cash losses would likewise be about half of what they are today. Amtrak’s productivity has declined in real terms since the mid-1990s.

**Other Federal Programs with Common Outcomes:** None.

***Management Challenge – Amtrak Financial Viability (IG/GAO)***

The 1997 Amtrak Reform and Accountability Act mandated that Amtrak develop a plan to eliminate its need for Federal operating support by FY 2003. The DOT IG, in a January 2002 report on Amtrak’s Financial Performance and Requirements, observed that: 1) Amtrak is no closer to operational self-sufficiency than it was in 1997; 2) There is insufficient time for Amtrak to become self-sufficient by the December 2, 2002 deadline; 3) Amtrak will likely need additional funding this year to continue operating; 4) Additional borrowing against assets—such as the 2001 mortgaging of Penn Station—would adversely affect the long-term prospects for the railroad; 5) Even if Amtrak becomes operationally self-sufficient this year, it will still need substantial Federal funds for capital improvements; and 6) Deferral of routine maintenance is starting to catch up with Amtrak. Similarly, GAO has discussed Amtrak’s need for greater progress toward the goal of operating self-sufficiency.

Amtrak has not made sufficient progress toward its goal of operating self-sufficiency in 2002, and the Amtrak Reform Council found that Amtrak would not reach operating self-sufficiency by December 2002.

**TRANSIT SYSTEM CONDITION:** Public transit provides people with reliable ways to get around day by day, whether they are going to and from work, school, entertainment, or shopping. DOT can enable transit agencies to improve bus and rapid rail fleet condition to serve the needs of the Nation’s cities.

**Performance Report:**

**Discontinued performance measures:**

Average condition of motor bus fleet (on a scale of 1 (poor) to 5 (excellent)).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	3.15	3.20	3.25	*
<b>Actual:</b>	3.13	3.21	3.02		

Average condition of rail vehicle fleet (on a scale of 1 (poor) to 5 (excellent)).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	3.19	3.24	3.29	*
<b>Actual:</b>	3.14	3.25	3.48		

*\* 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 the Transportation Accessibility performance goal.*

**External Factors:** State and local agencies allocate Federal urban transportation resources. Further, impact of today’s capital investments will not be realized for several years. In the meantime, changes in the national and regional economies may affect transit investment, maintenance, and use.

**2001 Results:** DOT met the target for improving the condition of the rail vehicle fleet, but did not meet the target for improving the condition of the motor bus fleet.

**Other Federal Programs with Common Outcomes:** None.

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## Performance Goals - Human and Natural Environment

<b><u>Performance Goal</u></b>	<b><u>Page</u></b>	<b><u>Data Details</u></b>
<b><u>Reduce Adverse Effects on Ecosystems and Improve Ecosystem Viability</u></b>		
Fishery Protection .....	89	166
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<b><u>Reduce Adverse Effects of Transportation Facilities</u></b>		
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## STRATEGIC GOAL: HUMAN AND NATURAL ENVIRONMENT

***Protect and enhance communities and the natural environment affected by transportation.***

### **W**e Aim To Achieve These Strategic Outcomes:

- Improve the sustainability and livability of communities.
- Reduce the adverse effects of transportation on ecosystems and the natural environment.
- Improve the viability of ecosystems.
- Reduce the adverse effects of transportation facilities on the natural environment.
- Improve equity for low income and minority communities concerning the benefits and burdens of transportation facilities and services.
- Reduce the amount of pollution from transportation sources.

Transportation makes our communities more livable, enhancing the quality of our lives and our society. However, transportation generates undesired consequences too, such as pollution, noise, and the use of valuable land and fisheries. No matter how much is done to improve the capacity and efficiency of our transportation system, we cannot consider our programs to be successful unless we also manage the effects on our environment, and ultimately our quality of life.

DOT's objective is to advance the benefits of transportation while minimizing its negative environmental impacts. The FY 2003 budget proposes \$3.1 billion in environmental funding to maintain progress in achieving our outcomes.

A summary performance report and a detailed analysis of our 2003 strategies follow.

#### **Performance Goals**

Reduce Adverse Effects on Ecosystems and Improve Ecosystem Viability

Fishery Protection

Wetland Protection and Recovery

Reduce Adverse Effects of Transportation Facilities

DOT Facility Cleanup

Reduce Transportation Pollution

Mobile Source Emissions

Oil and Pipeline Spills

Aircraft Noise Exposure

## Performance Report: Human & Natural Environment

	1995	1996	1997	1998	1999	2000	2001	2001 Target	Met	Not Met
Percent urban population living within 1/4 mile of a transit stop with service of 15 minutes or less (non-rush hour)	N/A	11.22	11.56	11.21	11.39	11.54	N/A	11.78		
Percent change in number of species designated as overfished	N/A	N/A	N/A	N/A	N/A	-9	-1*	-1	✓	
Percent DOT facilities categorized as No Further Remedial Action Planned under Superfund Amendments and Reauthorization Act	67	75	74	78	90	90	91	91	✓	
Tons (in millions) of mobile source emissions from on-road motor vehicles***	68.9(r)	69(r)	68(r)	66.9(r)	64.2(r)	64.0#(r)	62.9#	64.4(r)	✓	
Number of people in U.S. (in thousands) exposed to significant aircraft noise levels	N/A	N/A	N/A	722	585	440	446**	440**		✓
Gallons of oil spilled by maritime sources per million gallons shipped	6.6	7.2	1.6(r)	2.9(r)	2.6(r)	3.2	3.4	4.0	✓	
Tons of hazardous liquid materials spilled per pipeline million ton-miles shipped	0.0132	0.0232	0.0257	0.0119	0.0229	0.0131	0.0201*	0.0151		✓
Acres of wetlands replaced for every acre affected by Federal-aid Highway projects	N/A	2.3	2.6	2.2	2.3	3.8	2.1	1.5	✓	

# Projection

N/A = Not Available

\* Preliminary estimate

\*\* Due to a change in methodology, the 2001 actual data and target are calculated using different methodologies, but 440,000 people exposed to noise as calculated by the current method is the equivalent of 600,000 people calculated by the former method.

\*\*\* The Environmental Protection Agency (EPA) revised the emissions methodology used in calculating these estimates, leading to changes in previously reported emissions estimates. Estimates used in this report reflect the current EPA methodology.

**FISHERY PROTECTION:** The U.S. Exclusive Economic Zone (EEZ) covers 3.36 million square miles of ocean, and provides a livelihood for commercial fishermen, a vast supply of food, and recreation. Commercial and recreational fisheries contribute about \$50 billion annually to the U.S. economy. The Sustainable Fisheries Act (SFA) of 1996 mandates a reduction in the number of over-fished stocks. Responsible management and enforcement of ocean resource management regimes is of critical importance as demand for fish protein grows.

**Performance Goal:**

Ensure that economic competition for harvesting fishery resources remains within legal and resource management plan boundaries.

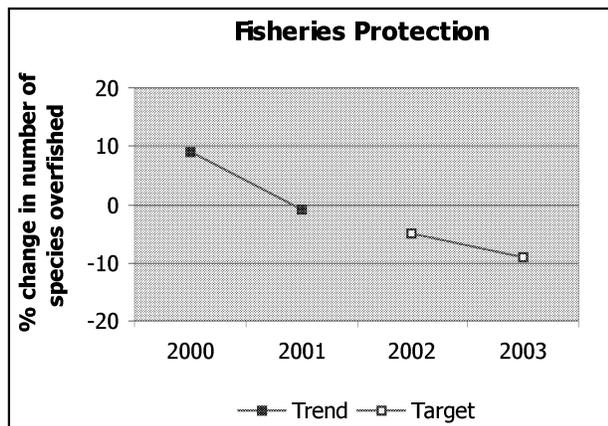
**Performance Plan:**

**Performance measure:**

Number of significant domestic fishery violations found.					
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	133	105
<b>Actual:</b>	392	273	113		

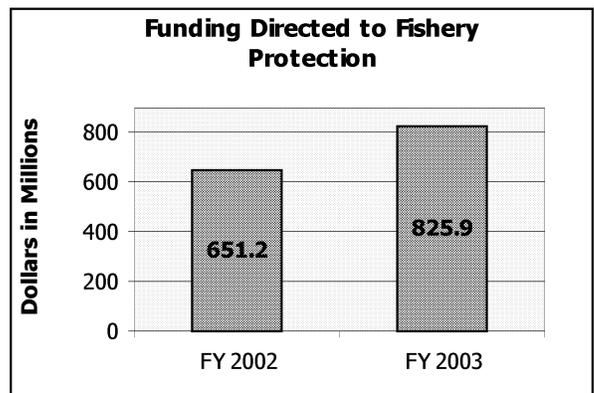
**Note on Data:** The former performance measure could not be correlated in any meaningful way to DOT’s contribution to economic resource protection. While the National Marine Fisheries Service measures the overall health of fish stocks, DOT contributes at-sea enforcement efforts in accordance with regional fishery management plans and NMFS regulations. “Significant Violations” is defined as those which result in one or both of the following conditions: 1) Significant damage or impact to the resource or to the fisheries management plan; 2) Significant illegal monetary advantage to the violator over their competitors.

**External Factors:** Economic pressure on fishers cause by dwindling fish stocks and strict catch limits may lead to higher levels of illegal behavior.



**Strategies and Initiatives to Achieve 2003**

**Target:** DOT resources attributable to this performance goal are depicted below:



Increased use of Vessel Monitoring Systems (VMS) will help with closed area enforcement but cannot be a substitute for an at-sea presence to ensure compliance with gear- and species-based regulations. NMFS is establishing a National VMS, and in FY 2001 the Coast Guard received funding to establish connectivity to this system. Also in FY 2001, the Coast Guard received funding to create new fisheries intelligence analyst positions in key Coast Guard regions. This will enable the Coast Guard to more effectively allocate its enforcement resources.

Continued close coordination with other Federal and State agencies will also be key to achieving success in this performance goal.

**Other Federal Programs with Common Outcomes:**

The NMFS and the Coast Guard play major and complementary roles in achieving the national goals of the Sustainable Fisheries Act of 1996. NMFS conducts scientific assessments of stock health, oversees development of regional fisheries management plans to sustain that health, and conducts shoreside enforcement of regulations. The Coast Guard provides at-sea enforcement. Numerous international fisheries

agreements and Executive Orders will soon enter into force that require coordination with the Departments of State and Justice, NOAA, and NMFS.

**Performance Report:**

**Discontinued performance measure:**

Percent change in number of species that are designated as overfished (only for fisheries management plans where Coast Guard has enforcement responsibility).

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	8%	-1%	*	*
<b>Actual:</b>	N/A	9%	-1%#		

# Preliminary results based upon draft NMFS report.

\* *Performance goal will be discontinued after 2001, to be replaced with the number of significant fishery violations.*

**2001 Results:** DOT met the performance target. This was based on a National Marine Fisheries Service (NMFS) draft report which indicates 5 species added and 4 removed from the overfished list, and 8 species of Pacific Northwest salmon removed from the list because they are now being managed under the Endangered Species Act. The Coast Guard can take credit, in part, for the rebuilding status of Georges Bank Haddock due to their enforcement efforts in the New England area.

Significant fishery violations found by the Coast Guard during at-sea enforcement has been decreasing since 1999. This indicates that behavior is changing at sea. Fisheries Training Centers were established in FY 1995, and in the course of the ensuing years, the violation rate increased as the Coast Guard's Boarding Teams improved their enforcement. In response to improved enforcement, compliance in the fishing industry increased. Vessel Monitoring Systems (VMS) may have also had an effect - when fishing vessels are monitored by VMS, their propensity to violate the law is lower. These deterrent effects, along with better Coast Guard interaction with Fisheries Management Councils, may explain the recent declining trend.

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

**WETLAND PROTECTION AND RECOVERY:** Wetlands are an important natural resource. They provide natural filtration of pollutants, and they store and slow down the release of floodwaters, thereby reducing damage to downstream farms and communities. Wetlands also provide an essential habitat for biodiversity. But many of the Nation’s wetlands have been lost to development over the years, before their value was fully recognized. Highways and transportation facilities (location, construction, and operation) can be a significant factor affecting these ecosystems.

**Performance Goal:**

Replace each acre of wetland removed by a Federal transportation project with half again as much in mitigation.

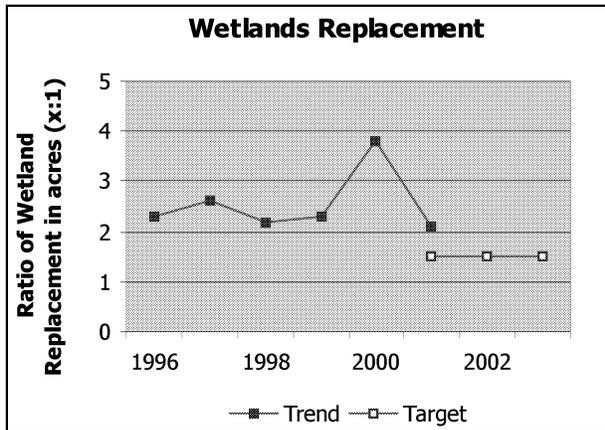
**Performance Plan:**

**Performance measure:**

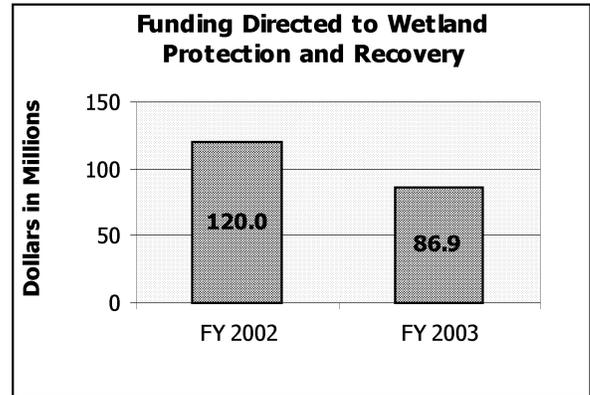
On a program-wide basis—acres of wetlands replaced for every acre affected by Federal-aid Highway projects (where impacts are unavoidable).

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	1.5	1.5	1.5	1.5	1.5
<b>Actual:</b>	2.3	3.8	2.1		

**External factors:** Wetland impacts are sometimes unavoidable, especially when bridges are being built. Projects on existing alignments can cause wetland degradation that is impossible to avoid. In areas where the concentration of wetlands is high (southern bottomlands, Midwestern prairie potholes, and eastern pine flatwoods), transportation projects must often traverse wetlands to provide access to the area.



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



FHWA, FTA, and Coast Guard work together to approve transportation projects that do as little harm as possible to the Nation’s wetlands.

FHWA promotes the design, construction, maintenance, and use of transportation projects that conform to Federal environmental legislation and regulations primarily through research, new technologies, analytical models, management training, and the transfer of technology. FHWA uses partnerships with resource agencies and reports, such as *Wildlife Ecology and Transportation Issues in Europe* jointly-sponsored by FHWA and the American Association of State Highway and Transportation Officials to publicize and promote best ways to avoid wetland takings in the first place, and good mitigation practices when projects unavoidably involve wetlands. FHWA will conduct additional research and development on wetland protection and enhancement, practical techniques of habitat restoration, and ecosystem analyses and characterization. This includes research on ecosystem analyses and methodologies, water quality course development, storm water management practices, functional evaluation of wetlands, and public information measures.

**Performance Report:**

**2001 Results:** DOT met the performance target. FHWA, FTA, and the Coast Guard, coordinated environmental mitigation efforts associated with permit-granting processes for Federal transportation projects with the Army Corps of Engineers to insure that transportation projects involving wetlands induced no long term harm to them.

Projects impacted approximately 1,905 acres of wetland, and provided 4,017 acres of compensatory mitigation. This mitigation performance represents about 2 percent of the estimated total nationwide wetland replacement, most of which comes from restoration of agricultural lands. This ratio is comparable for wetlands impact mitigation data for the Federal-aid program collected in FY 1996 through FY 2000, which average about 2.3:1.

FHWA sponsored the 4<sup>th</sup> International Conference on Wildlife Ecology and Transportation, and the 4<sup>th</sup> National Mitigation Banking conference. Both provided public information on wildlife and ecosystems, including wetland mitigation best practices.

FHWA published the Wetlands Accounting Database, a system designed to assist the State DOTs in managing their wetland mitigation activities. FHWA also published a report on wetland restoration case studies. Both publications emphasize a watershed approach and models in planning, developing, and managing data for mitigation and restoration activities.

FHWA continued to interact with other agencies, conducting joint research and developing implementation products on the hydrogeomorphic wetland assessment methodology (HGM). FHWA and the National Highway Institute presented the training course, Functional Assessment of Wetlands, which presents guidance and information to State DOTs and gathers feedback on use of the HGM.

**Other Federal Programs with Common Outcomes:** The Department coordinates wetland programs and research initiatives with EPA; the Departments of Interior, Commerce, and Agriculture; and the Army Corps of Engineers. FHWA is a member of several Federal Committees on wetlands and participates in joint research studies with other Federal agencies on wetland

evaluation and mitigation. Information is shared through all these activities.

**DOT FACILITY CLEANUP:** DOT has a special responsibility to ensure that its own facilities are compliant with environmental laws and regulations. Restoration activities involve identifying, investigating, and cleaning up contaminated sites. Compliance activities include the operation of facilities, equipment, and vessels in accordance with environmental requirements. Pollution prevention activities involve preventing future cleanup activities by avoiding the generation of pollutants in our operations or facilities. The Maritime Administration (MARAD) is required by law to dispose of obsolete ships in the National Defense Reserve Fleet (NDRF) by the end of FY 2006. MARAD is the U.S. Government’s disposal agent for merchant type vessels 1,500 gross tons or more. Due to the presence of hazardous substances such as asbestos and solid and liquid polychlorinated biphenyls (PCBs) and concerns raised by the EPA about the export of PCBs, sales for overseas disposal were halted in 1995. Additional ships will be added to the inventory as other merchant type Federal Government vessels become obsolete. Leaks from some of the ships in the NDRF have already occurred and the risk of environmental damage associated with the deteriorating ships continues to increase.

**Performance Goal:**

Ensure that DOT operations leave no significant environmental damage behind.

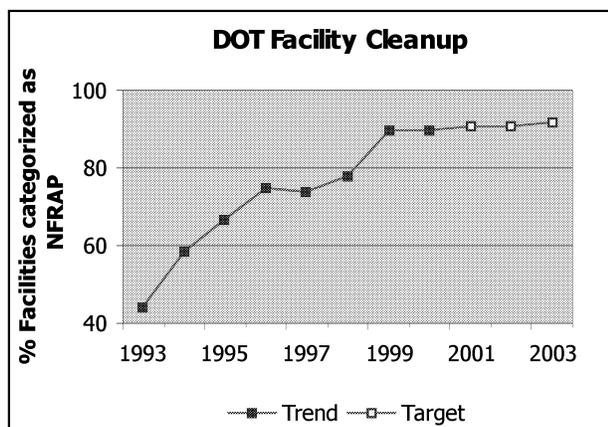
**Performance Plan:**

**Performance measure:**

Percentage of DOT facilities categorized as No Further Remedial Action Planned (NFRAP) under the Superfund Amendments and Reauthorization Act (SARA).

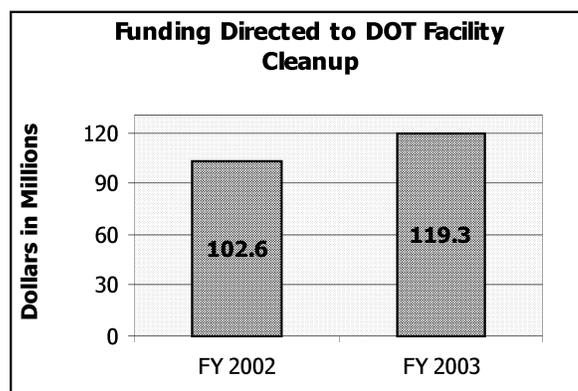
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	80%	82%	91%	91%	92%
<b>Actual:</b>	90%	90%	91%		

**External Factors:** The Environmental Protection Agency (EPA) has the authority to reactivate previously NFRAP sites, and new sites may be identified. Also, requirements may change as laws and resulting regulation change to reflect new research and findings. Ship disposals are dependent on a continued commercial interest in ship recycling.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



Facility cleanup will comply with the Superfund Amendments and Reauthorization Act (SARA) process and the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan. A “worst first” prioritization system is used to assign highest priority to those facilities representing the greatest potential hazard to the public health and the environment. Regulatory factors at the local, State, and Federal levels are also considered in the decision-making process.

- The Coast Guard will spend \$17 million to carry out the Coast Guard’s environmental compliance and restoration responsibilities. These responsibilities include environmental cleanup and restoration of contaminated current and former Coast Guard facilities, and proactive measures to bring Coast Guard facilities, vessels, and aircraft into compliance with Federal and State environmental regulations. Major cleanup projects are

required to continue at Kodiak, Alaska and Elizabeth City, North Carolina in FY 2003 to comply with Federal and State requirements. EPA proposed the USCG Yard for National Priority Listing (NPL) on September 13, 2001. Final rulemaking for NPL listing is scheduled for the Federal register in February 2003. At that time, the Yard will be required to conduct remedial action at approximately \$500,000 per year for several years.

- FAA funds pollution prevention; complies with occupational safety, health and environmental regulations; promotes good energy management practices; and conducts environmental impact analyses (\$31.3 million). Cleanup activities in compliance with mandatory schedules are ongoing in the Alaskan Region, the Mike Monroney Aeronautical Center, and the William J. Hughes Technical Center (\$20.0 million). FAA will also replace outdated fuel storage tanks at the end of their normal life-cycle with newer, higher standard tanks; register and test in-service tanks; and investigate, remove or clean tanks at decommissioned facilities (\$8.1 million).
- FRA will continue to work with the Department of Justice to resolve State issues at the formerly owned facility in Alaska.
- FHWA will continue work at one facility to meet the legal requirements of the involved State.

**Other Federal Programs with Common Outcomes:** DOT facility cleanup is based on EPA standards and is in line with government-wide efforts under SARA.

**Performance Report:**

**2001 Results:** DOT met the performance target.

The Coast Guard continued remediation at LORAN Station, St. Paul, AK; Support Center Elizabeth City, NC; and Support Center Kodiak along with other smaller sites. The Coast Guard also made progress on the aids to navigation battery recovery program and commenced the long process of removing polychlorinated biphenals from its decommissioned vessel fleet.

The FAA progressed in remediating their facilities in 2001, achieving NFRAP status for an additional facility. Sixty-five of the 68 facilities on the

Docket have now been categorized as NFRAP. The remaining three facilities are in process of remediation or are awaiting EPA determination of NFRAP status. Most of the facilities on the Docket are located in the Alaskan Region, where all 60 listed facilities have achieved NFRAP compliance.

FRA has three designated facilities. EPA has determined that no further remedial action is necessary at two of these facilities, and one formerly government-owned facility is being remediated. Efforts are continuing to determine the nature and extent of contamination at that facility.

FHWA has one designated facility. EPA has determined that no further remedial action is necessary at this site. However, due to contamination in the source area, additional field work was required by the State. FHWA agreed to implement an interim measure to attempt to control migration of contaminants from the source area.

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

***Management Challenge – Ship Disposal (IG/GAO)***

Ship disposal is a management challenge separate from DOT's goal to clean up its shore facilities. The Maritime Administration (MARAD) is the U.S. Government's disposal agent for merchant-type vessels of 1,500 gross tons or more. MARAD is required by law to dispose of obsolete ships in the National Defense Reserve Fleet (NDRF) by the end of FY 2006. As of March 2002, 133 ships await disposal.

Since 1994, environmental concerns and hazardous material regulatory obstacles have prevented the export of ships, which had until that time been a disposal option that maximized financial returns to the Government. New legislation in FY 2001 allowed MARAD for the first time to purchase scrapping services as an expedient means to remove the most deteriorated ships and provided \$10 million for this purpose. From the start of FY 2001 to the present, nine obsolete vessels have been removed from the fleets for disposal through a combination of payment for scrapping services, prior year vessel sales and artificial reefing.

In 2003, MARAD will dispose of 3-5 high-risk vessels through domestic scrapping (\$11.2

million). Domestic scrapping is currently the most expedient, assured and cost-effective disposal method for the highly deteriorated ships that represent an imminent environmental threat.

In addition to scrapping obsolete ships, MARAD will dispose of them by any or all of the following means:

- Artificial reefing (including the establishment of national remediation standards through a joint effort with the EPA and the Navy).
- Soliciting for the sale of recyclable obsolete vessels having a material value to recycling companies.
- Pursuing legislative changes to expedite ship disposal or create new opportunities.

MARAD is also pursuing the following alternatives:

- Export of ships for recycling (teaming with the EPA and the State Department to resolve environmental and worker health/safety issues).
- Soliciting innovative proposals from industry for ship disposal solutions.
- Seeking additional funding sources and partnerships (domestic and international) for ship disposal based upon the environmental, safety and training aspects of the program.

Each of the above alternatives has the potential to realize cost savings (compared to paid ship scrapping) and increase the number of vessel disposals. However, the potential results for these alternatives cannot yet be accurately quantified. If MARAD is to meet the legislative deadline for eliminating the current inventory of obsolete ships, approximately 43 ships a year must be disposed of during the FY 2004-2006 timeframe.

**MOBILE SOURCE EMISSIONS:** The National Ambient Air Quality Standards target six major pollutants as among the most serious airborne threats to human health. Transportation is a major contributor to some of the pollutants, particularly ozone, carbon monoxide and particulate matter. About two-thirds of transportation-related emissions come from on-road motor vehicles. The quality of our air is a public good, and the cost of these pollutants is not captured in the marketplace. For this reason, the Government works to mitigate this negative impact.

**Performance Goal:**

In support of the President’s Clean Air Initiative, ensure that emissions from transportation sources conform to Clean Air Act standards.

**Performance Plan:**

**Performance measure:**

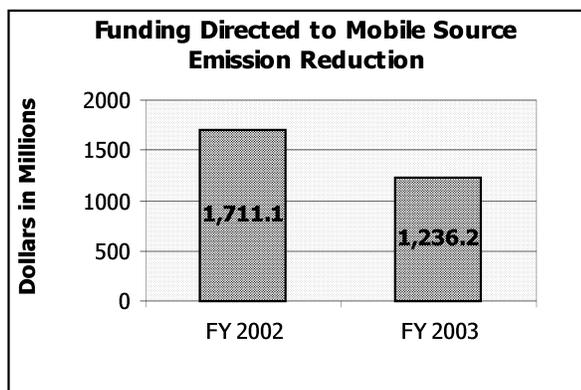
Monthly average number of area transportation emissions conformity lapses.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	N/A	6	6
<b>Actual:</b>	N/A	N/A	6#		

# Preliminary estimate.

**External Factors:** Growth in the U.S. economy has translated into annual growth in vehicle-miles traveled (VMT). The principal component—private vehicles—provides flexibility to consumers. So diversion of users to other, more emission-efficient modes must be balanced with market choice and other economic factors.

**Strategies and Initiatives to Achieve 2003**

**Target:** DOT resources attributable to this performance goal are depicted below:



DOT aims to reduce mobile source emissions by encouraging the use of less polluting transportation; designing and implementing infrastructure that reduces congestion and emissions; researching and modeling the emissions impacts of investment choices; and

supporting the development of fuel- and emission-efficient vehicles.

Through research, new technologies, and analytical models, FHWA promotes the design, construction, maintenance, and use of highways that are compatible with the National environmental goals. In partnership with our stakeholders, FHWA supports the development of environmental analytical models to assist decision makers. FHWA provides resources, guidance, and technical assistance for States and local agencies to ensure compliance with the National Ambient Air Quality Standards, especially reducing transportation-related emissions.

Major programs in 2003 include: funding over \$1.2 billion in projects to reduce emissions through the Congestion Mitigation and Air Quality (CMAQ) program; identifying challenges in implementing amended conformity regulations for clean air by issuing guidance and providing technical assistance; assisting State and local partners in the implementation of the transportation conformity regulation in new non-attainment areas, and studying rural air quality issues and developing approaches to demonstrate conformity in rural non-attainment areas; expanding the transportation and air quality public education effort including the Alliance for Clean Air and Transportation.

Through continued research, FHWA will develop approaches to improve air quality and to evaluate emissions impacts and cost-effectiveness of transportation strategies. Activities include research on air toxics and a 2.5-micron particulate matter emission model to support new National Ambient Air Quality Standards. The Agency will also continue to participate in the DOT Center for Climate Change and Environmental Forecasting to research the connection between transportation, energy use and greenhouse gas emissions.

**Other Federal Programs with Common Outcomes:** FHWA and EPA work cooperatively to implement a number of initiatives, including the Transportation and Air Quality public education initiative, the transportation conformity regulation, and the CMAQ program. The DOT and EPA have also jointly funded a number of research efforts that target the reduction of mobile source emissions.

**Performance Report:**

**FHWA Supplementary performance measure\*:**

Tons (in millions) of mobile source emissions from on-road motor vehicles.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>					
Original:	64.9	63.5	62.2	61.1	N/A
Revised:	67	65.7	64.4	63.1	*
<b>Actual:</b>					
Original:	61.6	59.7&			
Revised:	64.2	65.7&	62.9&		

*The Environmental Protection Agency (EPA) revised the emissions methodology used in calculating these estimates. The adjustments have led to changes in previously reported emissions estimates. Estimates used in this report reflect the current EPA methodology.*

Metric tons (in millions) of carbon equivalent emissions from transportation sources.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	*	*
<b>Actual:</b>	492.8#	##			

*(r) Revised; & Projected; # Preliminary estimate; ## Data not available;*

*\* Performance measures discontinued after 2001, due to the lack of credible data. FHWA will continue to track the tons of emissions from mobile sources using EPA data, and will discuss progress in the context of this performance goal.*

**2001 Results:** Based on projections, DOT met the performance target for mobile source emissions. The performance goal for greenhouse gases relating to transportation was suspended in the 2002 Performance Plan and will be discontinued. During FY 2001, 97 percent of ozone non-attainment and maintenance areas met

their mobile emissions budgets, as did 100 percent of areas for carbon monoxide and 94 percent of areas for particulate matter (PM-10).

Through the CMAQ program, FHWA provided funding for State and local governments to encourage the use of alternative fuel vehicles, inspection and maintenance programs, and other transportation control measures. Between 1992 and 1999, at least six States with poor air quality used CMAQ funding for inspection and maintenance programs. In addition, FHWA provided CMAQ funds to State and local governments for many other transportation projects that provide air quality benefits. While individual projects yield small benefits, taken together CMAQ-funded projects have helped non-attainment areas meet their mobile source emission budget.

The joint FHWA/Environmental Protection Agency (EPA) Public Information Initiative on Transportation and Air Quality developed and implemented plans to expand the initiative in a second phase. Several new creative materials in the form of television, radio, and print public service announcements were developed for stakeholders. The initiative generated requests for program materials from 60 communities nationwide. The FHWA continued to support the Alliance for Clean Air and Transportation, a National alliance of more than 20 public and private organizations, to support an education program to reduce traffic congestion and improve air quality.

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

**OIL AND PIPELINE SPILLS:** A large share of the U.S. economy is fueled by oil. Over half the oil used in the United States today is imported, and most of the imported oil is carried in tankships. Furthermore, with offshore drilling occurring further offshore, and larger cargo and tank ships plying the oceans, the task of preventing oil spills will become even more challenging. Oil spills can devastate ecosystems and can incur enormous response costs. More than 617 billion ton-miles of petroleum and other hazardous liquids move across the country through about 157,000 miles of hazardous liquid pipelines. While this is usually the least costly way to transport these bulk cargoes, it also entails some risk. Because of the volume of liquid hazardous materials moved by pipelines, any spill into the environment is potentially a significant one.

**Performance Goal:**

Reduce amount of oil spilled 20 percent by 2006.

**Performance Plan:**

**Performance measures:**

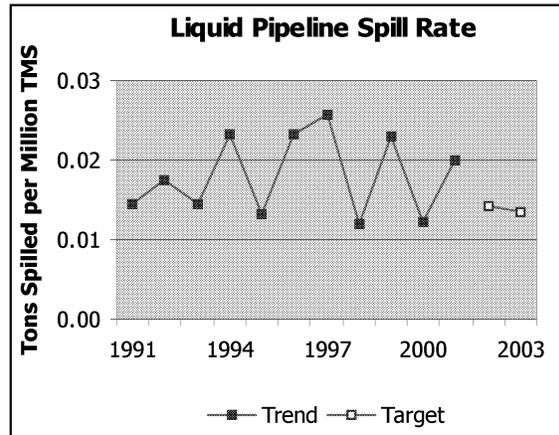
Gallons spilled per million gallons shipped by maritime sources.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	4.3	4.1	4.0	2.6	2.5
<b>Actual:</b>	2.7	3.2(r)	3.4		

Tons of hazardous liquid materials spilled per million ton-miles shipped by pipelines.					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	.0171	.0161	.0151	.0142	.0134
<b>Actual:</b>	.0229	.0131	.0201#		

(r) Revised; # Preliminary estimate.

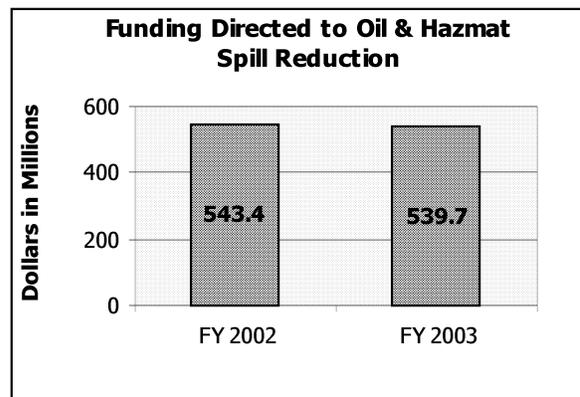
**Note on data:** The pipeline spill measure has a noticeable oscillation in the data over time with a general downward trend. Because of data variability, DOT will validate this measure in its current form and examine ways to improve this performance measure. RSPA is improving incident data to better identify potential solutions for reducing pipeline spills.

**External Factors:** Maritime trade is expected to double between 2001 and 2020; much of which will be on ships of other nations. Prevention and mitigation of pipeline spills requires improved site-specific knowledge of water and sensitive environmental areas to provide tailored actions to prevent leaks, and, if they do occur, assure that appropriate and timely response is undertaken.



**Strategies and Initiatives to Achieve 2003 Target:**

DOT resources attributable to this performance goal are depicted below:



The Coast Guard maintains an international engagement program as an essential part of its efforts to insure that substandard ships do not have the chance to foul the nation's coast or waterways. Domestically the Coast Guard ensures rigorous marine environmental protection efforts and regulatory safeguards continue. The Coast Guard aims to reduce oil spillage by 20% through both prevention and response efforts.

Adequate regulatory standards, and compliance programs to enforce those standards minimizes the risk of spillage for oil carried in ships and barges on American waterways, also for all aspects of oil exploration, production, storage and shipment under DOT's purview.

The Coast Guard develops pollution prevention standards, enforces pollution regulations and educates mariners on pollution prevention strategies and procedures. We employ the philosophy of "Prevention Through People" focusing on the human factors of the mariners and the industry. Past efforts in "Prevention Through People" are visible as the volume of oil spilled continues to decline.

The Coast Guard will employ emerging technology, lessons learned, and measurement systems to maintain and adjust existing prevention, response, and preparedness programs as the industry continues to research and develop additional oil supply sources, transport and storage methods.

RSPA will increase the safety and reliability of pipeline transportation by focusing on a goal to inspect and review the percentage of pipeline miles operated by large hazardous liquid operators subject to RSPA's integrity management program (IMP). In 2003, RSPA will increase IMP reviews to 75 percent of the number of miles operated by the nation's 65 largest hazardous liquid pipeline operators. RSPA will accelerate pipeline integrity testing, comprehensively evaluate all pipeline risks, and strengthen Federal/State pipeline safety oversight. Testing, evaluation, and repair will result in finding and solving problems before they lead to failures thereby directly supporting the goal of reducing spills. These initiatives support the Administration's new National Energy Policy (NEP) recommendations to facilitate growth of America's energy infrastructure by improving the integrity of, and public confidence in, the existing infrastructure. Pipeline integrity programs complement the safety goal for reducing excavation damages, the leading cause of pipeline failures. Other activities that will help further reduce spill size and consequence include:

- enforcing operator qualification requirements.
- expanding participation in industry consensus standards addressing inline inspection

technologies and qualifications criteria for the analysts who interpret their results.

- developing a standard for content and distribution of public education programs of operators.
- fielding engineering support for enhancing construction oversight, accident investigation, and monitoring remedial work on pipelines through contracted engineering services.
- enhancing analysis of the risks that pipelines pose to people and the environment through information systems improvements.
- enhancing readiness of both pipeline operators and local communities to recognize and mount effective and timely responses to pipeline accidents.
- improving oversight of pipeline operator emergency response activities, operator qualification programs, and hazardous liquid storage tanks.
- expanding pipeline operator oil spill response program exercises involving local, State, and other Federal personnel, with a new emphasis on security.

Pipeline integrity research helps assure that America's communities can live safely with pipelines by developing the technologies that detect or monitor the main causes of pipeline failure: construction-related damage, corrosion, material defects, and human error. These technologies will enable pipeline operators to identify and eliminate the defects that lead to death, injuries, and environmental damage.

R&D initiatives that help reduce spill size and consequence include:

- expanding ongoing acoustical monitoring technology that can help prevent construction-related damage to pipelines.
- developing new technologies to reveal defects in pipelines currently unpiggable using conventional in-line inspection technologies.
- enabling in-line inspection technologies to accurately detect and characterize longitudinal (e.g., seam) failures - an ability not shared by current in-line tools built primarily to detect circumferential defects from corrosion.

- beginning important new work on the application of remote sensing technologies to detection of right-of-way intrusion and remote monitoring of pipeline control systems.
- expanding airborne laser mapping leak detection technology.
- development of regulatory standards for leak detection technology and of related best practices.

#### **Other Federal Programs with Common**

**Outcomes:** The Coast Guard is the lead agency for oil pollution prevention and response in the coastal maritime zone, while EPA is the lead for inland waters; each agency may take immediate action as first Federal on-scene coordinator. During oil and gas exploration and development, the Coast Guard partners with the Minerals Management Service in environmental protection on the Outer Continental Shelf. For safety purposes and in coordination with Coast Guard investigations, the National Transportation Safety Board investigates some marine casualties that result in oil spills. The Coast Guard participates in a multi-agency workgroup to establish common or complementary goals for clean water.

RSPA will work to reduce the frequency and the size of spills by working with the Federal Energy Regulatory Commission, the National Oceanic and Atmospheric Administration, the Department of Energy, the U.S. Geological Survey, and others to help analyze risks to environmentally sensitive and populated areas through finalization of a National Pipeline Mapping System. RSPA is also working with the National Association of Pipeline Safety Representatives, trade associations such as the American Petroleum Institute, and other industry partners in designing new reporting systems and data improvements.

RSPA is working with the Environmental Protection Agency, the Department of Interior, and other natural resource trustees, environmental organizations, and the public to identify drinking water and ecological resources that are unusually sensitive to environmental damage from spills. RSPA has completed the Drinking Water Data Catalog as part of an environmental index initiative and has added the catalog to the web site, <http://ops.dot.gov>.

#### **Performance Report:**

**2001 Results:** DOT met the performance target for oil spills and missed the target for pipeline hazmat spills.

As in previous years, major and medium-sized oil spills were few in number but responsible for a large volume of the oil spilled. There were 4,518 oil spills, and only 12 were considered major or medium in volume. For example, in November 2000 the foreign-flagged tank vessel WESTCHESTER reported a possible grounding while anchored in the lower Mississippi River, which resulted in a single crude oil spill of more than 538,000 gallons. This single spill represents 55% of all the oil spills reported in FY 2001. The remaining 45% (445,758 gallons) comes from the other 4,517 reported oil spills.

Analysis reveals that vessel spill sources are shifting, from what was historically a barge and tank vessel source, to now include facilities. As the environment continues to change with exploration and production increases, continuing changes can be expected in the source of oil spills.

RSPA lowered the reporting threshold for hazardous liquid accident reporting from 50 barrels to five gallons beginning with accident reporting in 2002, and improved the usability of accident data in identifying strategies for further reducing pipeline spills.

RSPA continued to work with the American Petroleum Institute (API) to pilot test the new voluntary industry pipeline information system, created with joint industry/State/Federal input and participation. The API voluntary information system will provide data on much smaller spills than captured by the current threshold for Federal spill reporting, providing better trend data, information about precursors to leaks and environmental impacts, and remediation effectiveness.

RSPA continued to work closely with the Coast Guard and the Environmental Protection Agency in implementing the Oil Pollution Act of 1990 as it applies to onshore oil pipelines, which will decrease the likelihood of pipeline spills, diminish the environmental consequences of spills, and ensure that the responses to spills are swift and well planned. Operators are required to develop

response plans, test their plans in exercises, and implement them effectively in actual responses.

As detailed in the Safety chapter above, RSPA continued to increase public awareness of one-call centers to help reduce excavation damage to pipelines and to identify areas that are unusually sensitive- to environmental damage. By identifying where spills would cause the most environmental damage, RSPA is able to target its efforts to improve pipeline structural integrity and maximize the efficient use of available resources.

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

**AIRCRAFT NOISE EXPOSURE:** Public concern and sensitivity to aircraft noise around airports is high. In recent years, noise complaints have increased even while quieter aircraft technology has been introduced. Aircraft noise is an undesired by-product of our mobility, and the Government acts to reduce the public's exposure to unreasonable noise levels.

**Performance Goal:**

With the international aviation community, work toward further reduction of aviation noise at its source.

Mitigate the harmful effects of aviation noise for those living or going to school inside the significant aviation noise footprint.

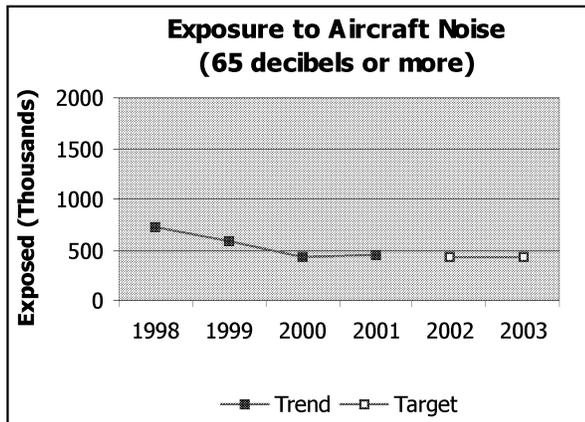
**Performance Plan:**

**Performance measure:**

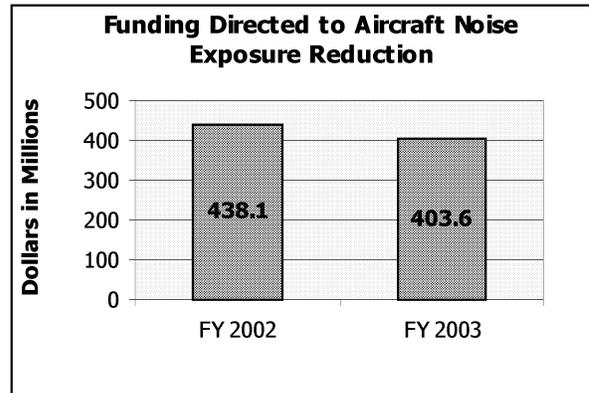
Number of people in the U.S. (in thousands) who are exposed to significant aircraft noise levels (65 decibels or more).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	N/A	N/A	440	440	440
<b>Actual:</b>	585	440(r)	446		

(r) Revised.

**External Factors:** Population growth around airports and increasing flight activity are factors that can negatively impact the FAA's ability to meet future noise exposure goals.



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



DOT pursues a program of aircraft noise control in cooperation with the aviation community through noise reduction at the source (development and adoption of quieter aircraft), soundproofing and buyouts of buildings near airports, operational flight control measures, and land use planning strategies. In 2003:

- The FAA's Airport Improvement Program will continue to provide funds for such noise reduction activities as the soundproofing of residences and buildings used for educational or medical purposes near airports, purchase of buffer zones around airports, and noise reduction planning.
- The FAA will continue to develop noise research and assessment technologies.
- FAA Air Traffic Services will implement operational flight control measures to help reduce neighborhood exposure to aircraft noise.
- FAA will continue examination and validation of the methodologies used to assess aircraft noise exposure, including incorporation of the effects of land-use policies and residential sound insulation programs.

In cooperation with the National Park Service, FAA will assess noise exposure at, and develop Air Tour Management Plans for, an estimated 45 national parks, as authorized in AIR-21. This is distinct from the issue of noise exposure around airports.

**Performance Report:**

**2001 Results:** DOT did not meet the performance target.

However, difficulties in measuring FAA's noise reduction or mitigation effects will not abate the continual efforts FAA undertakes in both international fora, and in regulatory and air traffic operations in this country to minimize harmful effects of aircraft noise.

**Other Federal Programs with Common Outcomes:** FAA has been engaged with NASA in joint noise reduction technology research. NASA in coordination with FAA and its industry partners is formulating a new Quiet Aircraft Technology (QAT) initiative to build upon the current research. The goal of the QAT is to reduce the perceived noise levels of future aircraft by a factor of 2 (10 decibels) within 10 years and by a factor of 4 (20 decibels) within 25 years, using 1997 subsonic aircraft technology as the baseline.

**TRANSIT SERVICE:** For the 80 million Americans who do not drive, public transit provides access to school, work, market, community services and family. Public transit also lessens highway congestion and helps maintain environmental quality by slowing the growth of automobile traffic. And it provides transportation alternatives. Together, these features help improve our communities.

**Performance Report:**

**Discontinued performance measure:**

Percent of urban population living within 1/4 (or .25) mile of a transit stop with service frequency of 15 minutes or less (non-rush hour).					
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Target:</b>	11.56	11.68	11.78	*	*
<b>Actual:</b>	11.39	11.54	N/A		

*N/A - performance information is not available.*

*\* Performance goal and measure will be discontinued after 2001 because this performance goal overlaps others in the Mobility and Economic Growth chapter describing DOT efforts to increase transit ridership and transportation accessibility. Transit service delivery levels which this performance goal captured is primarily a matter for State and local governments' decisions, and is largely outside Federal control .*

**External Factors:** The traditional commute from the suburbs into the city is becoming just one of many commuting patterns. People are moving farther away from the central cities, and jobs are increasingly located in the suburbs. Demographic shifts are often translating into longer commutes, and more scattered travel patterns.

**2001 Results:** DOT most likely did not meet the performance target, judging from previous trends.

**Other Federal Programs with Common Outcomes:** DOT works with several other Federal agencies to coordinate transportation, housing, economic development and environmental programs. In conjunction with the Department of Health and Human Services, DOT has actively participated in a joint coordinating council that has successfully encouraged local Medicare agencies to utilize regularly scheduled transit service for medical appointments in lieu of more expensive, specialized transportation. DOT and the Environmental Protection Agency are working together to promote the Commuter Choice initiative that helps mitigate congestion and encourages transit use, and also to

implement joint transportation planning and environmental guidance.

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## Strategies – Implementing the President’s Management Agenda Organizational Excellence

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## **Organizational Excellence**

### **Implementing the President’s Management Agenda**

***Advance the Department’s ability to manage for results and innovation.***

#### **STRATEGIC MANAGEMENT OF HUMAN CAPITAL**

President Bush’s management agenda focuses on long-term management of the Federal workforce and fostering a citizen-centered, results-based government that is organized to be agile, lean, and capable of making timely decisions. As we determine our human capital requirements, DOT will flatten our organization, through well-chosen and thoughtful restructuring.

#### **COMPETITIVE SOURCING**

We will use competitive sourcing as a key tool for getting the Department’s commercial-type work done most efficiently. By doing so, we can ensure that we are providing the highest quality and the most economical service to Americans.

#### **FINANCIAL AND PROCUREMENT PERFORMANCE**

Improved financial performance is a key aspect of improving the government’s performance. Knowing the full cost of DOT’s goods and services is the first prerequisite to managing DOT’s programs well. The General Accounting Office and the DOT IG have also identified DOT financial management as requiring focused effort to make needed improvements. Good financial stewardship, excellent and efficient procurement and acquisition systems, and improved financial performance are cornerstones of excellent DOT management.

#### **CITIZEN-CENTERED GOVERNMENT**

President Bush has called for citizen-centered Government that improves service to individuals, businesses, and State and local government through the use of information technologies. DOT is committed to improving transportation through market-based policies that foster competition, increase the range of transportation choices available to travelers and shippers, and making the U.S. transportation system as efficient as possible in order to enable maximum economic growth. DOT is also committed to better use of information technology to enable faster, easier, and more efficient ways for citizens to transact their business with DOT and to provide input on transportation policies and programs.

#### **BUDGET AND PERFORMANCE INTEGRATION**

The President’s Management Agenda stresses a sea change in Federal management – that of changing yearly budgetary and resource management decision focus from the “increment” to the “base” and by a relentless focus on accountability for programmatic results. This focus will be achieved by holding executives and managers accountable for results, and by making investment decisions based upon what has been demonstrated to work. Regular, systematic measurement, and accountability for program performance compared to pre-established goals, will be the means to improve DOT management.

**In implementing the President’s Management Agenda in DOT, we aim to achieve these organizational excellence outcomes:**

- Improve customer satisfaction
- Improve employee satisfaction and effectiveness
- Improve organizational performance and productivity

DOT is committed to the President’s vision of a citizen-centered, results- oriented government, and one that promotes innovation in transportation through market-based policies and through fostering competition in the transportation sector of the U.S. economy. A well-managed organization with a strong customer focus, a skilled and highly motivated workforce, and an emphasis on managing for results is essential to achieving DOT’s goals.

DOT is committed to improving its overall effectiveness and efficiency by listening to customers, providing top-quality service by reducing bureaucracy, enabling employees to develop and utilize their full potential consistent with the Department’s goals, and efficiently managing programs for maximum performance. DOT’s ability to meet its strategic goals is enabled through flattening the entire DOT organization, by investments in information technology for customer transactions with the Department, by improving financial management systems, and by thinking creatively and innovatively. By the 2004 budget, DOT expects to meet “green level” progress in all five areas of the President’s Management Agenda discussed in the following strategies.

<b>Performance Goals</b> Small disadvantaged and women-owned business contracting Environmental Justice
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The FY 2003 budget proposes \$678.3 million in funding to promote organizational excellence and meet the President’s management agenda. Some significant projects which will enable the Department’s performance are:

- Achieve full operating capability for Delphi, the Department’s new financial accounting system (\$18 million);
- Act as the managing partner for an intergovernmental on-line rulemaking project (\$5 million); and
- Implement a Departmental enterprise architecture and capital programming process for shaping information technology investments (\$2.6 million).

A summary performance report for goals included in this chapter, and an analysis of 2003 strategies follow.

**Performance Report: Organizational Excellence**

	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2001 Target</b>	<b>Met</b>	<b>Not Met</b>
Percent share of total dollar value of DOT direct contracts awarded to women-owned businesses	3.9	2.4	4.0	3.7	4.1	4.5	3.8	5		✓
Percent share of total dollar value of DOT direct contracts awarded to small disadvantaged businesses	23.4	19.8	19.6	17.0	17.9	17.7(r)	17.6	14.5	✓	
Environmental justice cases that remain unresolved after one year	2	3	3	6	5	10	9	4		✓

## Strategic Management Of Human Capital

### Human Capital Planning and Organizational Restructuring:

By fall 2006 large numbers of DOT employees will become eligible for retirement, and in DOT's critical occupations, such as engineers and executive managers, the numbers are especially high. To maintain the capability we need, DOT will:

- Develop and implement human capital solutions derived from our on-going human capital planning process, including competitive sourcing and restructuring.
- Revise the Department's human resources strategic action plan and existing workforce planning model to ensure alignment with the President's Management Agenda, the Department's updated strategic plan, and the budget process;
- Employ the individual performance assessment system to ensure accountability for performance results from its executives;
- Establish accurate inventories for competitive sourcing;
- Expand telecommuting within DOT.

Transportation Security Administration (TSA) is being created partly from existing resources in the FAA and the Office of the Secretary, in part from the aviation industry's existing security contractors, and in part "from scratch". Since Homeland Security is a critical duty of the Federal Government, first and foremost, the TSA will be focused on performance, and staffed through competitive sourcing and through flexible and agile personnel systems established in law.

Coast Guard is mirroring personnel transformation efforts in the Defense Department. Yesterday's military workforce models clearly are of decreasing relevance for a transformed military service. In parallel with the Deepwater acquisition project, particularly as its operational and logistical concepts come clearly into focus in 2002, the Coast Guard is conducting a workforce re-invention effort to take advantage of the potential that information technology and the commercial

supply chain marketplace offers to fashion a more effective operational Coast Guard.

FAA is redirecting a major portion of its organization - 37,300 employees - into a results-oriented Air Traffic Organization (ATO), freeing most of the FAA to manage better, and modernize faster and more efficiently.

### ***Management Challenge – Strategic Human Resource Planning (GAO/OMB)***

GAO has stated that the entire Federal Government faces an impending wave of retirements of long-service, highly competent Federal employees. From this arises a large-scale strategic human resource planning issue. While this exodus of talent will not happen overnight, DOT must plan now to maintain required levels of experience, competencies, and knowledge levels in the Department's civilian, military, and contract workforce. Succession planning as well as managing and maintaining adequate institutional knowledge will be crucial for DOT's ability to carry out its functions during this period of high workforce turnover.

The Department's Strategic Human Capital Management Plan will address the President's Management Agenda and GAO's management challenge.

## Competitive Sourcing

DOT's 2001 FAIR Act inventory identified over 11,000 FTE performing commercial functions. By the end of 2003, DOT will have competed 15% (more than 1,500) of those commercial positions.

## Financial and Procurement Performance

### Acquisition Management:

#### **Performance Goals:**

For major DOT capital acquisition projects, achieve 90 percent of cost and schedule milestones, and achieve 100 percent of planned capability and performance benefits upon full fielding of the capital equipment.

Award at least 5 percent of direct DOT contracts to women-owned businesses, and at least 14.5 percent of direct DOT contracts to small disadvantaged businesses.

**Performance Plan:**

**Performance measures:**

For major DOT acquisitions, percentage of cost, schedule, and performance goals established in acquisition project baselines that are met. #

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	90%#	90%#
<b>Actual:</b>					

Percent share of the total dollar value of DOT direct contracts that are awarded to women-owned businesses.

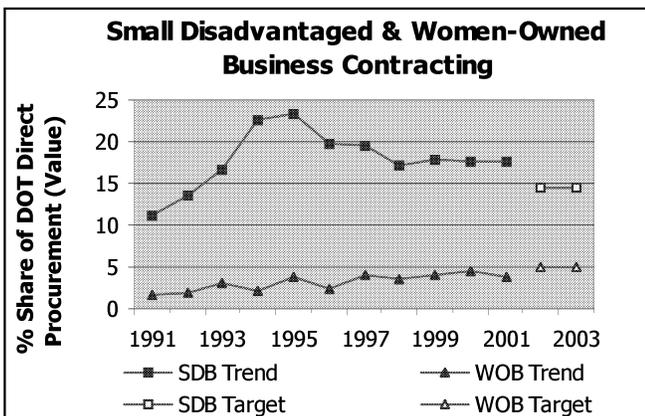
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	5	5	5	5.1	5.1
<b>Actual:</b>	4.1(r)	4.5	3.8		

Percent share of the total dollar value of DOT direct contracts that are awarded to small disadvantaged businesses.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	14.5	14.5	14.5	14.5	14.5
<b>Actual:</b>	17.9(r)	17.7	17.6		

(r) Revised.

# DOT will implement an aggressive performance goal to ensure that DOT capital acquisition projects are completed on time, on budget, and deliver the planned performance or capacity benefit to the traveling public. The performance targets are preliminary, since DOT is currently validating cost, schedule, performance, and capacity baselines for all major capital acquisition. The acquisition performance goal will encompass major acquisitions of TSA, FAA, and USCG.



*Performance-based contracting* – DOT’s agency-wide Procurement Performance Management System policy includes a measure for Performance Based Service Contracting consistent with the 20% by FY 2004 goal established in the Government-wide Acquisition Performance Measurement Program. In 2002 and 2003, DOT intends that 20% and 22% respectively, of all service contract dollars will be performance based.

*Expanding on-line procurement* – DOT will continue to require all procurement solicitations appropriate for electronic posting be conducted electronically through ‘FedBizOps’ – the one-stop Federal procurement online gateway.

*Small Disadvantaged (SDB) & Women-Owned Business (WOB) Contracting:* DOT’s SDB and WOB percentage goals are set in cooperation with the Small Business Administration (SBA), and total 19.5 of the total dollar value of direct DOT contracts. WOBs do not have a special set-aside authority allowing them to compete in a restricted market for Federal procurements. Therefore, WOBs must successfully compete with other small businesses for small business set-aside procurements or with all businesses for full and open procurements. To assist WOBs to successfully compete, DOT and the Office of Small and Disadvantaged Business Utilization (OSDBU) conduct outreach, training and offer financial assistance. DOT is increasing its outreach efforts to SDBs and the contracting community itself. DOT’s \$3 million outreach and technical assistance program will help small businesses in general, many of which are disadvantaged or women-owned businesses.

**Financial Management:**

DOT’s FY 2001 Consolidated Financial Statement received an “unqualified” opinion from the IG. DOT is confident that this will be the case for the future as well. DOT continues to implement Delphi, the Department’s commercial off-the-shelf core accounting system replacement.

DOT is making good progress in being able to report quarterly financial results by FY 2003, and we will be better able to manage unit costs of service delivery in all front-line functions for citizens - for example, in issuing airman and merchant mariner documents, and in processing innovative financing or grant applications.

FAA continues to address asset management problems through detailed corrective action plans extending over multiple years and involving numerous offices. FAA will complete actions in FY 2002 to provide an integrated financial and asset management system.

**DOT and FAA Audited Financial Statements (IG/GAO/OMB)**

As indicated by the IG, GAO, and OMB, the introduction of all DOT activities to the Department's financial accounting has presented a significant management challenge, requiring DOT to develop more comprehensive cost accounting systems, and – most critically – to develop improved record keeping and valuation procedures for property, plant, and equipment. This last requirement remains a significant challenge for FAA, whose direct provision of services to the public involves significant capital assets. DOT has tackled its financial management challenges full force.

The foregoing discussion in its entirety covers these management challenges.

**Performance Report:**

**2001 Results:** DOT met the performance target for small disadvantaged businesses' share of DOT direct contracts, and did not meet targets for environmental justice, and cases women-owned businesses' share of DOT direct contracts. SDBs received \$372 million and WOBs received \$78 million of DOT's direct procurements. Total DOT procurements were \$2.1 billion, which is an increase from the \$1.9 base estimated for the year. Though short of the 5.0% WOB goal, the 3.7% achievement is above the government-wide average of approximately 2.3%.

OSDBU conducted outreach through its Transportation Equity Act Model and through Marketplace and Training Conferences. OSDBU also operates the National Information Clearinghouse that assists SDBs and WOBs to identify potential contracting opportunities. OSDBU made more electronic marketing and contract information available to WOBs, assisting them in becoming better informed on how to do business with DOT and in accessing transportation-related contract opportunities. OSDBU provided funds to the National Women's Business Council to promote and encourage women-owned businesses in procuring Federal

contracts. DOT's ongoing Bonding Assistance Program and Short Term Lending Program improved WOBs' access to financing and bonding.

Financial Stewardship:

**Performance goals:**

Achieve 95 percent of schedule milestones for major Federally funded transportation infrastructure projects, or miss those milestones by less than 10 percent.

Achieve 95 percent of cost estimates for major Federally funded transportation infrastructure projects, or miss them by less than 10 percent.

Adhere to government-wide small disadvantaged business and women-owned business contracting goals.

**Performance Plan:**

**Performance measures:**

For major Federally-funded infrastructure projects, percentage that meet schedule milestones established in project or contract agreements, or miss them by less than 10%.\*

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	95%*	95%*
<b>Actual:</b>					

For major Federally-funded infrastructure projects, percentage that meet cost estimates established in project or contract agreements, or miss them by less than 10%.\*

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	95%*	95%*
<b>Actual:</b>					

*\* DOT will implement an aggressive performance goal to ensure that major Federally funded transportation infrastructure projects are completed on time, on budget, and deliver the planned performance or capacity benefit to the traveling public. The performance targets are preliminary, since DOT is currently validating cost, schedule, performance, and capacity baselines for all major infrastructure projects. The transportation infrastructure project performance goal will encompass major projects funded by, and subject to oversight of, FHWA, FTA, and FAA.*

DOT operating administrations will also ensure that controls against fraud, waste and abuse of Federal infrastructure grant funds are strengthened. DOT will conduct outreach to grant recipients and will work with States to heighten awareness of ways to curtail fraudulent activities, and to maintain good accountability for grant expenditures. In its relationships with State and local highway agencies, FHWA and FTA will continue to stress fraud indicators and reporting procedures, and will work with the transportation and highway industry to include the IG as a resource for reporting allegations of fraud, waste, and abuse on Federal-aid infrastructure construction projects. FAA will continue its coordination with airport authorities for fraud awareness.

DOT requires its contracting officers to: (1) review all completed contracts on an annual basis to ensure that only those funds necessary to pay the contractor's final invoice are retained under the contract, (2) determine the need for an independent audit, (3) take full advantage of contract quick closeout procedures, (4) comply with DOT policy on monitoring of contract closeouts, and (5) reduce the backlog of completed contracts that need to be closed out. Doing so will ensure that excess funds obligated to contracts will be timely de-obligated and redeployed to the government's advantage.

**Management Challenge – Financial Stewardship (IG/OMB)**

**Contract Closeout (IG/OMB);**

**Management of Large Transportation Infrastructure Projects (IG/GAO/OMB)**

Monitoring the cost, schedule, and performance of "mega projects" is critical to identify problems and initiate action to mitigate risks as soon as possible. The Department has identified and initiated steps to improve its oversight of these projects by developing a comprehensive, standard oversight approach. Elements of this approach include vigorous enforcement of financial reporting requirements, designating accountable oversight managers for "mega projects", and taking timely action to protect Federal interests on projects designated as "at risk." FHWA and FTA have developed new guidance for financial reporting on infrastructure projects greater than \$1 billion. Critical analysis of these plans will ensure the Department is provided complete and

consistent reporting of basic standardized financial data. Fully developed finance plans have been useful in identifying emerging cost and funding shortfalls in projects.

Proper and timely administrative closure of contracts and proper management control safeguards against waste, fraud, and abuse has been identified by the IG and OMB as areas for improvement. Properly closed contracts ensure that the Government pays only what it owes, upon presentation of an invoice by Departmental contractors, and that any excess obligated funds can be de-obligated and deployed elsewhere.

The Department will continue to improve institutional and personal accountability systems to ensure that large transportation infrastructure projects are adequately managed and periodically reviewed by a high-level Departmental Council.

DOT has taken the following actions:

Establishing project oversight, by designating competent oversight managers who are personally accountable for proper Federal oversight; and establishing Integrated Product Teams to assist the oversight manager. Professional certifications for Federal oversight managers will be funded, and grant recipients' project management staff will be required to have professional certifications.

Establishing a formal management and reporting framework, by creating a DOT Executive Council to review project oversight; fostering a collaborative relationship between Federal project oversight managers and grant recipients to facilitate communications; and requiring grant recipients to submit project management plans with agreed-upon oversight provisions and which incorporate "Earned Value Management". Additionally, projects with significant deviations from cost and schedule baselines will be designated as "at risk". Grant agreements will provide financial incentives for comprehensive project management systems, and will insure that a dedicated funding source exists for independent oversight reviews.

Insuring accountability by incorporating mega-project oversight into DOT Performance Plans, inviting external audits, and by providing proper incentives for excellent oversight performance by DOT employees.

## Citizen Centered Government

### Performance Goal:

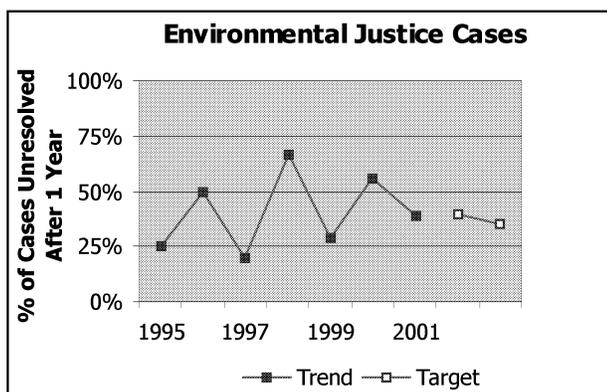
Ensure that transportation projects are accomplished even-handedly, so that no community or group bears a disproportionate burden.

### Performance Plan:

#### Performance measure:

Percent of Environmental Justice cases that remain unresolved after one year.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	N/A	N/A	N/A	40%	35%
<b>Actual:</b>	29%	56%	39%		



Executive Order 12898 directs each Federal agency to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. To achieve this objective, DOT operates under existing authorities, such as the National Environmental Policy Act (NEPA) and Title VI of the Civil Rights Act of 1964. DOT's Environmental Justice policy incorporates these considerations in all DOT programs, policies, and activities.

DOT works with stakeholders and officials at the State, regional, and local levels to ensure environmental justice concerns are integrated into the transportation planning process. To counter the factors that delay resolution, DOT employs two strategies: 1) emphasizing public involvement by minority and low income communities at a very early stage of transportation project planning; and 2) encouraging improved analysis by metropolitan planning organizations (MPOs) and State DOTs of

the potential equity impacts of transportation projects.

DOT will educate stakeholders, provide Title VI training, and ensure public participation in the concept stage -- before project designs are chosen -- by reaching out to potentially affected populations.

**Other Federal Programs with Common Outcomes:** DOT works with other agencies to share expertise and resolve jurisdictional overlaps and duplications, principally through an interagency working group, chaired by EPA.

### Performance Report:

#### Discontinued performance measure:

Number of Environmental Justice cases that remain unresolved after one year.

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>Target:</b>	12	10	4	*	*
<b>Actual:</b>	5	10	9		

\* Performance measure discontinued after 2001 and replaced with percent of cases remaining unresolved after a year.

**2001 Results:** DOT did not meet the performance target. A complicating factor for speedy case resolution is the long planning process for transportation infrastructure projects – sometimes as much as 20 years. Points at which third parties seek to intervene in project decision making vary, and can lead to lengthy resolution efforts.

Quantification of the adverse effects of transportation projects on minority and low-income communities, determining causality of effects, and showing disproportionate civil rights impacts continue to be difficult, and alternative dispute resolution does not always succeed.

Activities included stakeholder partnership meetings with civil rights and environmental activists, and metropolitan planning organization and governmental representatives in the Atlanta, Georgia area. This model effort included development of an equity analysis and public participation work plan in response to a threat-to-sue letter on grounds that included EJ issues.

Customer Service Focus and E-Government:

In FY 2003, DOT plans to increase its use of knowledge management and information technologies to improve the services we provide to citizens, businesses and State and local governments by making best practices and innovations available to all DOT staff via DOTnet. DOT will also encourage customer service training for all front line employees and open lines of communication from the front line to program managers to improve our products and services. We recognize that our front line employees may provide vital information to build partnerships and other long-range relationships with customers as well as obtain feedback that can be used to help improve customer satisfaction.

DOT will complete improvements in its customer support web site by providing one-stop shopping for transportation consumers and providers. The new web site will make it easier and faster for the public to locate information about DOT's products and services by linking to existing web pages under topical headings. For example, the new page on regulations will contain links to DOT's dockets as well as to all of DOT's web pages devoted to specific modal regulations. The customer support web site will also be the primary administrative mechanism that provides the public the opportunity to seek correction of information disseminated by DOT under OMB guidelines for ensuring the quality, objectivity and integrity of information. The goals of the customer support web site are to provide rapid and reliable answers to the public's questions, and to analyze the inquiries to determine customer requirements and needs.

DOT is an active contributor to OMB's E-Government Task Force. The Task Force has identified high payoff, crosscutting opportunities that improve services and implement E-Government. Several DOT initiatives such as the Docket Management System, our executive correspondence system, and the Transportation Virtual University are components of the initiatives selected for government-wide implementation.

DOT has enjoyed several successes in "e-government" and will continue to do more along these lines:

- FHWA implemented an improved, paperless financial management information system in early 2002. The new system is a user-

friendly, web-enabled system, including electronic signatures, so that State DOT's can report data with about 30 percent less internal reporting. More than two-thirds of States are now using this improved system, and users of the system's information and reports have increased by 25 percent. State users of the system total 50 percent of the user base.

- Coast Guard is upgrading its computer system to enable forms associated with the collection of marine casualty, chemical, drug and alcohol testing information to be completed and submitted electronically.
- FAA is currently working on a rulemaking proposal that will allow electronic collection of data associated with their anti-drug program for personnel engaged in specified aviation activities. In addition, they are exploring the use of electronic signatures to further reduce the information collection burden for medical standards and certification.
- FAA processes approximately 770,000 airman certifications and/or rating applications annually. An automated form is currently being beta tested that will allow this information to be completed on-line.
- FAA processes approximately 450,000 pilot medical certification applications annually. A pilot project is under way to allow for electronic signature and submission of all documentation electronically.
- FMCSA customers can now obtain and pay for a variety of DOT goods and services on-line by using their credit card or electronic fund transfer from their bank account. This site was established to allow FMCSA customers to conduct business at their convenience. The site is available 24 hours a day.
- FMCSA customers can apply for motor carrier certificates of authority, request name and address changes for existing certificates of authority, request reinstatement of certificates of authority, or pay fines or filing fees for motor carrier insurance via the internet.
- Since the summer of 1999 more than 17,000 FMCSA customers have used these on-line services. Currently more than 30% of motor carrier registration applications are done via the internet.

Information and Technology Management:

DOT will complete development of an Enterprise Architecture (EA) in FY 2003, will implement the Capital Planning and Investment Control (CPIC) processes this year, and will make progress in inventory actions required by the Government Paperwork Elimination Act (GPEA). During the course of EA development, we will look at all business processes throughout the Department and identify those that have applicability across multiple organizations. The degree to which existing processes can benefit from increased automation will be factored into proposed solutions. DOT will develop IT business case investment information for use in strategic planning, budget formulation, and decision-making. For investments that are critical to achievement of DOT missions, particular emphasis will be placed on providing investment information covering alignment with DOT's strategic goals and the appropriate acquisition, management, and use of such IT capital investments. Also, systems common to multiple DOT organizations that offer the opportunity to achieve significant operational and economic efficiencies through coordination and consolidation of efforts will be identified and analyzed for synergy and efficiencies.

DOT will reduce information collection burden hours imposed on the public and meet GPEA requirements to deliver information and transact business electronically by October 2003. A 5% reduction in paperwork burden hours from FY 2000 was not achieved. DOT will continue to mitigate paperwork burdens on the public, but substantial reduction is particularly difficult without changes to Congressional mandates. An online system (completed in 2002) for monitoring and reporting progress on complying with the Government Paperwork Elimination Act should aid in these efforts.

In 2001, DOT:

- launched a new DOT intranet (DOTnet). The new site has tools for communication and collaboration; and allows employees to choose the information they see on their homepage.
- made significant progress implementing Section 508 of the Rehabilitation Act to ensure that all of the Department's electronic and information technology (EIT) systems are accessible to people, including both

employees and members of the public, with disabilities. Progress in FY 2001 included: published policy and guidance on issues in the areas of legal, civil rights, acquisition, personnel, and electronic and information technology; conducted extensive awareness and training sessions; established a procurement vehicle to enable operating administrations to obtain Section 508 compliance tools and assistance; and implemented a Department-wide 508 web page compliance status monitoring and reporting tool.

- Transitioned the Department from the previous Capital Programming Database to the Office of Management and Budget's recommended Information Technology Investment Portfolio System (ITIPS).

Fostering Competition:

The DOT General Counsel, FAA, and the Bureau of Transportation Statistics collect and report consumer information to the traveling public to enable the air travel market to operate more efficiently. Reports are regularly made public on airline service quality, flight delays and cancellations, passenger oversales and denied boardings, flight departures and passengers transported. DOT has the authority to prevent unfair methods of competition in the airline industry, and this authority is exercised when appropriate to benefit both consumers and competition. The airline industry itself is also responsible in the marketplace to treat its customers well.

In accordance with existing statutory authorities and as a member of the Air Transportation Stabilization Board established by the Air Transportation Safety and System Stabilization Act, DOT is acting to ensure that the Nation's airline industry remains viable, safe, and secure after the events of September 11, and to ensure that market forces, not terrorist acts, determine the long-term economic future of the industry.

***Management Challenge – Airline Mergers, and Customer Service Commitment (IG/GAO)***

As stated by the IG, airlines have committed to improving air travel by improving communication with passengers, quoting the lowest available fare, timely return of lost baggage, and taking

care of passengers during extended onboard aircraft delays. Extensive flight delays, baggage not showing up on arrival, and long check-in lines remain as major sources of dissatisfaction by air passengers. Efforts to solve these problems have been frustrated by record delays, which translate into customer discontent. Until the FAA, airlines, and airports effectively address these areas, there will continue to be discontent with air travel. Additionally, as GAO has pointed out, the lack of effective competition in certain markets has contributed to high fares and poor service. Increased competition and better aviation service will entail a range of solutions by DOT, the Congress, and the private sector.

Government needs to be the watchdog of competition to ensure that competitive conditions continue to exist. In response to complaints by new entrant airlines that incumbent airlines were engaging in unfair competitive practices, the Department informally investigated major airline responses to entry by low-fare airlines. If complaints have a substantial basis in fact, the Justice Department brings actions against the parties.

The Department of Justice is responsible for determining whether mergers should be challenged on competitive grounds. The Department of Transportation conducts its own analysis of merger transactions and provides its views on competitive issues to the Justice Department.

DOT has a significant backlog of allegations of unfair competition, hoarding airport capacity, oppressive computer reservation system practices and civil rights violations. Congress provided additional FY 2002 funding for additional staff to address the complaint backlog and provide more help to individuals with disabilities under the Air Carrier Access Act.

## **Budget and Performance Integration**

### Results-oriented decision-making:

By clearly focusing on investments on programs that work, and by exerting effort to make well-designed programs achieve their intended results; DOT will increase the value it creates for the American people. The chief means to accomplish our intended results is to hold executives and managers accountable for those results. DOT has thoroughly revamped its performance plan and is

taking steps to revitalize and refocus its system of individual and organizational accountability. Departmental leaders, senior executives, and flag officers will be included in this system, which will increase alignment of resource decision-making and programmatic effort with DOT's strategic purposes.

In the 2004 budget, DOT will propose additional budget accounts for realignment to more closely integrate performance goals in the budget structure, similar to what is being proposed in FAA's Facilities and Equipment, and Research, Engineering and Development appropriation accounts.

### **Management Challenge – Government Performance and Results Act Implementation (IG/OMB)**

The IG has noted that GPRA requires Federal agencies to develop five-year strategic plans, annual performance plans and annual performance reports. The IG further noted that DOT's strategic and performance plans are among the best in the Federal Government. To continue this success, DOT needs to improve the reliability and timeliness of its performance data, and provide better linkages between budgets and performance results.

DOT has acknowledged that increasing the validity, reliability, timeliness, and comparability-over-time of performance data will be a challenging task. In its most recent strategic plan, DOT included a data improvement strategy under each strategic goal. To improve DOT's data capacity, BTS is leading the development of standards for DOT's data, training people in the collection and interpretation of transportation data, and coordinating data series among operating administrations. In FY 2002, DOT will develop leading indicators for its strategic goals and most DOT performance measures to help anticipate trends in each of these outcomes. DOT will also complete an assessment of data quality for the major data collection systems in DOT, and document the major sources of error in all of DOT's performance measures. By the end of FY 2004, consensus data standards will be in use throughout DOT.

Beginning with the FY 2002 performance plan, DOT has more closely linked budgeted amounts with each performance goal. This performance plan allocates the Department's budget request to

specific outcome and performance goals, not just strategic goals. The Department will continue to refine its attribution process in subsequent plans to aid strategic decision-making.

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## Performance Data and Performance Measurement

Performance measurement is dependent on the availability of useful data. Useful data will indicate level of performance and progress toward organizational goals. All data are imperfect in some fashion. Pursuing “perfect” data, however, may consume public resources without creating appreciable value. For this reason, there must be an approach that provides sufficient accuracy and timeliness but at a reasonable cost. This section of the Performance Plan/Performance Report provides information on how DOT reports on performance, verifies and validates data, assesses limitations of the data, and plans for improving DOT’s data.

### Performance Data Completeness and Reliability

In an attempt to bring consistency and quality to its performance reporting, DOT has implemented some general rules regarding the data it uses and how it is evaluated.

Annual data – Whenever available, the data in this document are reported on a Federal Government fiscal year basis. However, there are instances where this is not possible so calendar year data are used instead. This often occurs when data are collected and reported to DOT by external sources and a calendar year reporting requirement is specified in the implementing regulation. The reporting timeframe (FY or CY) for each measure is included in the Data Details in Appendix I.

Annual results – If available, the results for the most recent year in the Report are listed as “Actual” in the Performance Goals & Results box for each performance measure. However, given the March deadline for submission of the Performance Report, quite often data have not been compiled and finalized for the entire year. When this occurs and an actual value is not available for the current year, either an estimate or projection is provided instead. In general, estimates are based on partial year data that are extrapolated to cover a full 12-month period. For example, if six months of data are available, they will be compared to prior years for the same six-month period to determine any variation from past levels. Historical trend information, supplemented by program expertise, will then be applied to estimate the remaining six months of performance. The result will be identified as a “preliminary estimate” in the Report. If partial year data are not available, then past trend information will be analyzed and supplemented by program knowledge to develop a projected value for the annual performance measure. The result

will be identified as a “projection” in the Report. As data are finalized, the projections and preliminary estimates will be replaced by actual results. Results may be amended as errors and omissions are identified in the data verification process, because updated information is provided by the reporting sources, or because of legal or other action that changes a previously reported value. For example, updated pipeline spill reports may change the status of a previously reported value used in performance measurement.

In measuring progress toward the majority of performance goals, DOT is moving to a system of monthly performance measurements. This will make it much easier to internally gauge periodic progress toward goals as the year progresses, and will enable more timely performance reporting after the years’ end.

Completeness of Data – As described above, actual data and “preliminary estimates” incorporate complete or partial data from 2001. Results listed as “projections” are not based on data from 2001, but on trend data from prior years.

Reliability of Measurement Data – Because performance results in a given year are influenced by multiple factors, some of which are beyond DOT’s control, and some of which are due to random chance, there may be considerable variation from year to year. (See discussion in Appendix I.) A better “picture” of performance may be gained by looking at results over time to determine if there is a trend. Therefore, graphs are provided for each measure showing trend lines back to 1990, or as many years as possible if data are not available back to 1990. Additionally, a table is included at the beginning of each strategic goal section giving the available data from 1995 through 2001 for measures with performance goals specified for 2001.

## Verifying & Validating Performance Measures

Integral to performance measurement is understanding data limitations, addressing these limitations where necessary and cost-effective, and acknowledging those that remain when interpreting results. This section on verification and validation provides a DOT-wide overview of our plan for assessing the quality of the data DOT uses to measure its performance, and follows the GAO definitions for verification and validation:

“Verification is the assessment of data completeness, accuracy, consistency, timeliness, and related quality control practices.”

“Validation is the assessment of whether data are appropriate for the performance measure.”

Virtually all data have errors. In Appendix I we have provided the following information about the data used for each performance measure: source of the data, limitations of the data, observations about the quality of the data, work planned or ongoing to improve data quality, and any known biases.

Additionally, we have compiled Source and Accuracy Statements for each of the DOT data programs used in this report, which can be found at [www.bts.gov/statpol/SAcompendium.html](http://www.bts.gov/statpol/SAcompendium.html). The Source and Accuracy Statements give more detail on the methods used to collect the data, sources of variation and bias in the data, and methods used to verify and validate the data.

By validating data used in the DOT performance plan, we are ensuring that those data are reflective of the phenomena they purport to measure. The Office of the DOT Inspector General (OIG) plans to selectively verify and validate performance measurement data each year. When pertinent to the conduct of ongoing projects, OIG will also assess performance measures to determine their appropriateness for measuring progress toward stated goals. These assessments may lead to changes in the goals, improvements to or additions of data collection systems, or both.

Assessing and, where possible, eliminating sources of error in DOT data collection programs has always been an important task for data program managers. As a part of their ongoing work, managers of Departmental data programs use quality control techniques, such as

flowcharting the data collection process, to identify where errors can be introduced into the data collection system. Program managers also use computerized edit checks and range checks to minimize errors that may be introduced into the data of their respective programs. In addition, quality measurement techniques are employed to measure the effects of unanticipated errors. These include verification of data collection and coding, as well as coverage, response and non-response error studies to measure the extent of human error affecting the data. As sources of error are identified, steps are initiated to improve the data collection process.

The data used in measuring performance come from a wide variety of sources. Much of the data originates from sources outside the Department and, therefore, outside the direct control of the Department. The data often come from administrative records or from sample surveys. While DOT may not have a strong voice in improving the quality of outside data, the Department takes all available information about the limitations and known biases in outside data into account when using the data.

The myriad data sources make the task of assessing and, where possible, eliminating error a challenging one for DOT. Different data systems contain different types of errors. For example, data from administrative records systems may have missing or incorrect records, and data from sample surveys will contain sampling error.

Several measures (particularly in safety) require aggregation across transportation modes. This can be particularly problematic because of the use of different definitions in different transportation modes. Also, data from outside the Department may have unknown error properties.

To help the operating administrations address these issues, the Bureau of Transportation Statistics (BTS) is developing a statistical policy framework where the operating administrations will work together to identify and implement the current statistical “best practices” in all aspects of their data collection programs. This project is consistent with the data capacity discussions found in the DOT Strategic Plan.

In 2001, a DOT intermodal working group addressing DOT data quality issues continued to:

- develop Departmental statistical standards;

- update Source and Accuracy Statements for all DOT data programs to document limitations and known errors and biases;
- improve quality assurance procedures;
- evaluate sampling and non-sampling error; and;
- develop common definitions for data across modes.

BTS's statistical staff is consulting with the DOT operating administrations' data program managers to assist in data evaluation and validation, documenting data sources, and determining the reliability of performance measurement estimates.

Departmental data systems managers use these data verification methods:

- Comparisons with previous data from the same source.
- Comparisons with another reliable source of the same type of data within DOT for the same time period.
- Comparisons with another reliable source of the same type of data within DOT for a previous time period.
- Comparisons with another reliable source of the same type of data outside DOT for the same time period.
- Comparisons with another reliable source of the same type of data outside DOT for a previous time period.

In addition to computerized edit checks and clerical review procedures to look for outliers, duplicate records, and data inconsistencies, data managers also verify data quality at each step of the data collection process using these procedures:

- Re-collecting/re-interviewing all (or a sample of) records and reconciling with the original collection. (This applies to census or sample survey data collections from administrative records, organizations, or individuals.)
- Conducting 100 percent (or a sample of) data re-coding and reconciliation to assess and correct coding errors.

- Conducting 100 percent (or a sample of) data re-entry and reconciliation to assess and correct data entry errors.

The American Travel Survey's re-interview program, in which a sample of households were re-contacted and differences reconciled, is an example of a verification system within a data collection program.

## Data Limitations in Performance Measures

DOT Data Source Limitations – Timeliness is the most significant limitation for DOT performance measurement data. Some DOT data are not collected annually. For example, the National Household Travel Survey and the Commodity Flow Survey each collect data every five years. Data that are collected each year (or more frequently) require time to analyze, confirm and report results. For example, Highway Performance Monitoring System vehicle-miles traveled (VMT) data require several months of post-collection processing, making final results unavailable for this performance report.

Other performance measurement data limitations can be found in the previously mentioned Source and Accuracy Statements for DOT data programs. These statements contain descriptions of data collection program design, estimates of sampling error (if applicable), and discussions of non-sampling errors. Non-sampling errors include under-coverage, item and unit non-response, interviewer and respondent response error, processing error, and errors made in data analysis.

As part of its mandate in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Equity Act for the 21st Century (TEA-21), and its plans for a statistical policy framework in the Department, BTS is working on a program of research, technical assistance, and data quality enhancement to support the continued improvement of data programs in DOT. This will help data program managers throughout DOT improve data quality and better document known data limitations. BTS also assists operating administrations with data collection and documentation.

Many of DOT's internal data programs rely on State DOTs to collect reliable statistics within cost

constraints. While we work closely with our State DOT partners, we do not have direct control over these data.

External Data Source Limitations – Timeliness is also a significant limitation for external or third-party data. Other limitations of external data are noted in the comments for each performance measure in Appendix I. In some cases, DOT has replaced external data, where little is known about the quality of the data, with internal data. For example, DOT has used estimates of person-miles traveled (PMT) from private organizations, absent any better estimate. The 1995 Nationwide Personal Transportation Survey and American Travel Survey give DOT data with known error properties that allow a better estimate of PMT.

## **Our Data Needs**

The DOT Strategic Plan 2000 – 2005 identifies data needs for each of the Department’s strategic goals. They include:

Safety – DOT is undertaking major efforts over the next several years to improve safety data. Safety has always been our primary strategic goal, and in 1999 DOT created a Safety Data Action Plan to better organize data improvement efforts. BTS will lead efforts to: 1) develop common criteria for reporting injuries and deaths; 2) develop common data on accident circumstances; 3) improve data quality; 4) develop better data on accident precursors; 5) expand the collection of near-miss data to all transportation modes; 6) develop a variety of common denominators for safety measures; 7) advance the timeliness of safety data; 8) link safety data with other data; 9) explore options for using technology in data collection; and 10) expand, improve and coordinate safety data analysis.

Homeland Security – Existing performance data sources are generally good, but DOT will collect data to better understand the transportation system’s vulnerability to intentional acts of disruption or destruction.

Mobility – All mobility outcomes present complex measurement issues. Accordingly, DOT will: 1) develop ways of measuring user transportation cost, time, and reliability with time-series data; 2) develop better approaches for measuring access; 3) develop straightforward measures of congestion and its costs; 4) produce more timely

and comprehensive data on the condition and use of the transportation system; and 5) develop a more complete understanding of variables influencing travel behavior.

Economic Growth – DOT needs aggregate data for measuring the productivity, effectiveness and efficiency of the U.S. transportation system. We plan to collect, analyze and disseminate data and information that identify critical trends and issues relating to transportation’s nexus to the U.S. economy. DOT will: 1) develop a means of measuring transportation cost, time, and reliability – at an aggregate level – with time-series data; 2) develop a comprehensive measure of the transportation capital stock; 3) improve our view of changes in the transportation workforce; 4) develop better measures of productivity in the transportation sector, and other issues concerning use of Producer Price Indices; and 5) develop a better picture of transportation-related variables influencing U.S. competitiveness in the global economy.

Human and Natural Environment – DOT will: 1) develop comparable and complete data on transportation emissions, noise, hazardous materials releases, and wetlands impacts; 2) improve our understanding of collateral damage to the human natural environment; 3) create better leading indicators for potential environmental issues; and 4) develop a reliable method of measuring the environmental benefits of bicycling and walking.

## Appendix I – Performance Measures (Detail)

Each table includes a description of a performance measure and associated data provided by the agencies in charge of the measure. The Scope statement gives an overview of the data collection strategy for the underlying data behind the performance measure. The Source statement identifies the databases used for the measure and their proprietary agencies. The Limitations statement describes some of the shortcomings of the data in quantifying the particular performance characteristics of interest. The Statistical Issues statement has comments, provided by the Bureau of Transportation Statistics (BTS) and the agency in charge of the measure, that discuss variability of the measure and other points. The Verification and Validation statement indicates steps taken by the proprietary agencies to address data quality issues.

DOT feels strongly that full compliance with the Government Performance and Results Act requires impartial reporting of the statistical uncertainty associated with numerical performance measures. A portion of this uncertainty is related to the methodology used to calculate the performance measure and the accuracy of the underlying data. For example, the use of samples introduces uncertainty because estimates are used in lieu of actual counts. Also, there may be errors in the data collected. However, there are many other sources of variation (e.g., nonsampling errors, climate effects, new technology) and they are often difficult to quantify. Nonetheless, a combination of past data and expert judgment can enable uncertainty statements that are order-of-magnitude correct for even the most difficult problems.

The standard error of a performance measure indicates the likely size of the chance variation in the reported number. It incorporates both the effects of measurement error, survey error, and so forth, as well as the variation that occurs naturally from year to year (i.e., even if there were no change in laws, infrastructure conditions, or human behavior, there would still be chance variation in an annual count of fatalities). DOT success in meeting GPRA goals must be viewed in the context of this background noise.

In many of the following Statistical Issues statements, BTS refers to regression standard error. This is a modification of the standard error to take into account linear trends in the recent past. Such adjustment is generally needed to incorporate consistent trends due to cumulative effects of such things as education programs, changing demographics, the gradual adoption of new technologies, and so forth. The underlying assumptions are that: over a short time period the trend of the measurement data is linear; for any given year the performance measure values are normally distributed; and the standard deviation is the same for all years. We believe that these assumptions lead to a conservative estimate of variability.

The regression standard error is an estimate, calculated from the annual performance results, of this common standard deviation. It may be used in the same way as a regular standard error to set confidence intervals or describe uncertainty. For the purposes of performance measurement, it may be considered a rough approximation of the annual variability in a measure, and it will include the affects of program initiatives, influences beyond the control of DOT (e.g., weather, petroleum prices, etc.), random chance, and errors inherent in the data.

For further information about the source and accuracy (S&A) of these data, please refer to the BTS S&A compendium available at [www.bts.gov/statpol/SACompendium.html](http://www.bts.gov/statpol/SACompendium.html).

## Details on DOT Measures of Overall Safety

### Transportation Safety

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| <b>Measures:</b> | <ol style="list-style-type: none"><li><b>1. Transportation fatalities. (CY)</b></li><li><b>2. Fatalities per 100 million passenger-miles. (CY)</b></li><li><b>3. Fatalities per 100 million ton-miles of freight. (CY)</b></li><li><b>4. Transportation injuries. (CY)</b></li><li><b>5. Injuries per 100 million passenger-miles. (CY)</b></li><li><b>6. Injuries per 100 million ton-miles of freight. (CY)</b></li><li><b>7. Transportation incidents. (CY)</b></li></ol> |
|------------------|--|

- Scope:** This family of measures aggregates fatalities, injuries and incidents across all modes of transportation (air, highway, railroad, transit, waterborne and pipeline).
- The fatality and injury rates per 100 million passenger-miles exclude pipeline fatalities and injuries due to minimal interaction with passenger miles. Highway-rail grade crossing fatalities and injuries are not counted since they are included in data for highways.
- The fatality and injury rates per 100 million ton-miles of freight include fatalities and injuries from large truck, rail, waterborne and pipeline transportation. Highway-rail grade crossing fatalities and injuries are also included since these involve freight transportation-related fatalities and injuries that would not otherwise be counted. Ton-miles of freight covers intercity truck, rail, water and oil pipeline transportation. Aviation fatalities, injuries and ton-miles are excluded because the fatality and injury data are not separated from passenger air carriers. Transportation incidents include crashes, system failures, spills, releases, and other accidents of a similar nature.
- Source:** The data for these measures are obtained from National Transportation Statistics published annually by the Bureau of Transportation Statistics. Information is taken from the following tables: Transportation Fatalities by Mode; Injured Persons by Transportation Mode; U.S. Passenger-Miles (Millions); U.S. Ton-Miles of Freight (Millions); and Transportation Accidents by Mode. The one exception is the data on large truck fatalities and injuries used for calculating fatality and injury rates per 100 million ton-miles of freight are obtained from the Federal Motor Carrier Safety Administration.
- Limitations:** Double counting of fatalities and injuries may occur when an accident involves more than one mode of transportation. Differing definitions of injuries or transportation-related fatalities makes comparison across modes of transportation problematic. Highway injuries and incidents are obtained from a nationally representative probability sample and are estimates, while the totals for other modes of transportation are actual counts. The highway estimates are based on crashes where a police accident report was completed and the crash resulted in property damage, injury or death. Accidents that were not reported to the police or did not result in property damage are not included. Highway passenger miles are calculated by multiplying vehicle-miles of travel (VMT) by the average number of occupants for each vehicle type. VMT is based on a nation-wide sample of vehicle travel. The average number of vehicle occupants comes from survey information. Therefore, vehicle passenger miles is an estimate, whereas passenger-miles for other modes of transportation are calculated based on actual passenger counts and recorded trip lengths.
- Statistical Issues:** All fatality totals, and the injury and incident numbers where actual counts are recorded, are relatively accurate. Any double counting or omissions are expected to be fairly small. The primary source of uncertainty in these measures comes from sampling and survey errors related to estimation of highway injuries, incidents, VMT and vehicle occupancy. Based on data from 1994-2000, the annual variations in the transportation safety measures are as follows: the regression standard error for the number of transportation fatalities is 0.5 thousand. For fatality rates by passenger-miles and ton-miles, it is 0.010 and 0.007, respectively. For number of injuries, it is 0.10 million. For injury rates by passenger-miles and ton-miles, it is 2.50 and 0.24, respectively. For incidents, it is 0.16 million.

- Verification & Validation:** BTS compiles the data for the *National Transportation Statistics* from information it gathers directly in its own data systems (e.g. airlines information), information published by other sources (e.g. FHWA highway statistics), or by personal communication with the agency/organization responsible for collecting the data. Each data source conducts error checks and monitors the accuracy of its data. Most of these sources and their verification and validation procedures are described in subsequent data details in this report for performance measures of individual modes of transportation.
- Comment:** While caution should be exercised in comparing fatalities, injuries and incidents between modes of transportation due to differences in definitions and calculations, the aggregation of these values still provides useful information. Because the methodology for calculating these measures has remained consistent over the years, the trend information should provide a reasonably accurate picture of results.

## Highway fatality rate

Page 15

<b>Measure:</b>	<b>Fatalities per 100 million vehicle-miles-traveled (VMT) (CY)</b>
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**Scope:** The number of fatalities is the total number of motor vehicle traffic fatalities which occur on public roadways within the 50 states and Washington, D.C.

Vehicle Miles of Travel (VMT) represent the total number of vehicle miles traveled by motor vehicles on public roadways within the 50 states and Washington, D.C.

**Source:** Motor vehicle traffic fatality data are obtained from NHTSA's Fatality Analysis Reporting System (FARS). To be included in FARS, a motor vehicle traffic crash must result in the death of a vehicle occupant or a non-motorist within 30 days of the crash. The FARS database is based on police crash reports and other state data. FARS includes fatalities on all roadways open to the public, using the National Highways System classification of roads. Pedestrian and bicycle fatalities that occur on public highways, but do not involve a motor vehicle, are not recorded in FARS. However, they constitute only a small number of fatalities.

VMT data are derived from FHWA's Traffic Volume Trends (TVT), a monthly report based on hourly traffic count data in the Highway Performance Monitoring System (HPMS). Information is transmitted to NHTSA where it is reviewed for consistency and accuracy before being entered into the system. These data, collected at approximately 4,000 continuous traffic counting locations nationwide, are used to determine the percentage change in traffic for the current month from the same month of the previous year. The percentage change is applied to the nationwide travel for the same month of the previous year to obtain an estimate of nationwide travel for the current month. The data are recorded as monthly totals and cumulative yearly totals.

**Limitations:** VMT data are subject to sampling errors, whose magnitude depends on how well the locations of the continuous counting locations represent nationwide traffic rates. HPMS is also subject to estimating differences in the states, even though FHWA works to minimize such differences and differing projections on growth, population, and economic conditions that impact driving behavior.

**Statistical Issues:** The primary source of uncertainty in estimating fatality rates is the denominator. While the estimate of total fatalities used in the numerator is relatively accurate, the estimate of total vehicle miles in the denominator has far more variability. Based on data from 1994-2000, the annual variation in the fatality rate has a regression standard error of 0.029.

The estimates of the number and percentages of persons killed in motor vehicle traffic crashes during 2001 are preliminary and are based on incomplete data and statistical models. NHTSA's first official estimates for 2001, the Early Assessment, are being developed and will be completed in early April 2002. Differences between the Official Early Assessment estimates and those in this report are to be expected.

**Verification & Validation:** Fatality data from FARS are reviewed and analyzed by NHTSA’s National Center for Statistics and Analysis. Quality control procedures are built into annual data collection at 6 and 9 months, and at year’s end. A study was completed in 1993, looking at samples of FARS cases in 1989 through 1990 to assess the accuracy of data being reported. VMT data are reviewed by FHWA for consistency and reasonableness.

**Comment:** This data program has been in use for many years and is generally accepted for describing safety on the Nation’s highways. Adjusting raw highway fatalities and injuries by VMT provides a means of portraying the changes in highway fatalities on a constant exposure basis and facilitates year-to-year comparisons.

**Large truck-related fatalities**

<b>Measure:</b>	<b>Number and rate (per million commercial VMT) of fatalities in crashes involving large trucks. (CY)</b>
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**Scope:** The measure includes all fatalities (e.g., drivers and occupants of passenger cars, motorcycles, large trucks, or pedestrians) associated with crashes involving trucks with a gross vehicle weight rating of 10,000 pounds or more. The number of fatalities comes from NHTSA’s Fatality Analysis Reporting System (FARS) data, a census of fatal traffic crashes within the 50 states, Puerto Rico, and Washington, D.C. The fatal crash rate is the number of fatalities per 100 million vehicle miles of large truck travel (VMT).

**Source:** NHTSA’s Fatality Analysis Reporting System (FARS) provides fatality data. The VMT data are derived from the Federal Highway Administration’s (FHWA) Highway Performance Monitoring System (HPMS).

**Limitations:** FARS data elements are modified from year to year to respond to emphasis areas, vehicle fleet changes, and other needs for improvement. Large truck VMT reported to FHWA by each state is based on a sample of road segments and is not a census. In addition, the methods used to calculate total VMT may vary from state to state. The methods used by the states to estimate the VMT contribution from rural and urban minor collectors are unknown.

**Statistical Issues:** The fatality counts in FARS are generally quite accurate. The major sources of error are underreporting by some precincts and inconsistent use of the definition of a truck. Based on 1994-2000 data, the chance variation in a given year has a regression standard error of approximately 157 fatalities. Because the VMT data provided to FHWA from each state are estimates based on a sample of road segments, the numbers have associated sampling errors. The methodology used by each of the states to estimate VMT is not known and may introduce additional non-sampling error. Although states provide VMT estimates on an annual basis, they are only required to update their traffic counts at all sampling sites once every three years. Thus an annual VMT estimate from a particular state may be based, in part, on data collected during a previous year. Based on 1994-2000 data, the chance variation in a given year in the number of fatalities per 100 million vehicle miles of large truck travel has a regression standard error of 0.053.

**Verification & Validation:** Fatality data are reviewed and analyzed by NHTSA’s National Center for Statistics and Analysis. Quality control procedures are built into data collection and data processing. A study using samples of 1989-1990 FARS cases was completed in 1993 to assess the accuracy of data being reported. FHWA routinely works with state data providers to modify reported VMT values that do not appear reasonable before incorporating them into its final master file.

**Comment:** The FARS data have been around for many years and are generally accepted as a good source for describing fatal crashes on the Nation’s highways. The large truck VMT data used to calculate fatal crash rates have both sampling and non-sampling (i.e., bias) error associated with it. The impact of these errors on FMCSA’s estimates of large truck crash rates is considered to be minimal.

**Alcohol related highway fatalities**

<b>Measure:</b>	<p><b>1. Alcohol-related fatalities per 100 million vehicle-miles traveled.</b></p> <p><b>2. Percentage of highway fatalities that are alcohol related. (CY) (2001)</b></p>
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**Scope:** The number of fatalities resulting from motor vehicle traffic crashes that are alcohol related and occur on public roadways within the 50 states and Washington, D.C.

**Source:** Motor vehicle traffic fatality data are obtained from NHTSA’s Fatality Analysis Reporting System (FARS). FARS is a census of fatal motor vehicle traffic crashes within the 50 states, Puerto Rico, and Washington, D.C. To be included in FARS, a crash must result in the death of a vehicle occupant or a non-motorist within 30 days of the crash. The FARS data are based on police crash reports and other state data. FARS includes fatalities on all roadways open to the public, using the National Highways System classification of roads. Pedestrian and bicycle fatalities that occur on public highways, but do not involve a motor vehicle, are not recorded in FARS. However, they constitute only a small number of fatalities. A fatal motor vehicle traffic crash is alcohol-related if either a driver or a non-motorist (such as a pedestrian) involved in the crash had a measured or estimated blood alcohol concentration (BAC) of 0.01 grams per deciliter or above.

**Limitations:** Blood Alcohol Concentration test results are not available for all drivers and non-occupants involved in fatal crashes. Missing data can result for a number of reasons -- the most frequent of which is that persons are not always tested for alcohol. To address the missing data issue, NHTSA has developed a statistical model (Multiple Imputation) to estimate specific values of BAC across the full range of possible values. Estimating missing BAC in this manner will permit the estimation of valid statistics such as variances, measures of central tendency, confidence intervals and standard deviations. The statistical model is based on important characteristics of the crash including crash factors, vehicle factors, and person factors. While this measure does not link alcohol with fault in fatal crashes, the more comprehensive scope of the measure compensates for a possible undercount of the extent of the alcohol impaired driving problem. Multiple Imputation differs from the statistical model used in previous years. However, all historical series of alcohol involvement will be revised back to the 1982 data year to reflect the estimates from the new methodology.

**Statistical Issues:** The primary sources of uncertainty in this performance measure arise from information gaps in the number of intoxicated non-motorists, and from using the statistical model to estimate the number of intoxicated drivers.

The estimates of the number and percentages of persons killed in motor vehicle traffic crashes during 2001 included in this section are preliminary and are based on incomplete data and statistical models. They were provided to meet the time restraints required for this report. NHTSA’s first official estimates for 2001, the Early Assessment, are being developed and will be completed in early April. Differences between the Official Early Assessment estimates and those in this report are to be expected.

**Verification & Validation:** Data are reviewed and analyzed by NHTSA’s National Center for Statistics and Analysis. Quality control procedures are built into annual data collection at 6 and 9 months, and at year’s end. In 1987 and 1988, an independent panel of academics reviewed and commented on the statistical methods used in measuring alcohol-related highway fatalities. This report recommended that research and development utilize a model that would permit the imputation of missing BACs as a semi-continuous variable.

**Comment:** This data program has been used for many years and is generally accepted for describing safety on the Nation’s highways.

**Highway injured persons rate**

<b>Measure:</b>	<b>Injured persons per 100 million vehicle-miles-traveled (VMT) (CY) (2001)</b>
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**Scope:** The number of injured persons is an estimate of the total number of persons injured in motor vehicle traffic crashes that occur on public roadways in the 50 states and Washington, D.C.

Vehicle Miles of Travel (VMT) represent the total number of vehicle miles traveled by motor vehicles on public roadways within the 50 states and Washington, D.C.

**Source:** The number of injured persons data are derived from the NHTSA’s National Automotive Sampling System (NASS) General Estimates System (GES). The NASS GES is a nationally representative probability sample that yields national estimates of total nonfatal injury crashes, injured persons, and property-damage-only crashes. NASS GES data cover all roadways open to the public, using the National Highways System classification of roads.

VMT data are derived from FHWA’s monthly report, Traffic Volume Trends (TVT), a monthly report based on hourly traffic count data in the Highway Performance Monitoring System (HPMS). Information is transmitted to NHTSA where it is reviewed for consistency and accuracy before being entered into the system. These data, collected at approximately 4,000 continuous traffic counting locations nationwide, are used to determine the percentage change in traffic for the current month from the same month of the previous year. The percentage change is applied to the nationwide travel for the same month of the previous year to obtain an estimate of nationwide travel for the current month. The data are recorded as monthly totals and cumulative yearly totals.

**Limitations:** GES data are obtained from a nationally representative sample of 60 sites. The results provide only national data, not state level data, and are subject to sampling error. The magnitude of the sampling error depends on the number of Primary Sampling Units (PSUs) in the sample and the number of crash reports sampled within each PSU.

VMT data are subject to sampling errors, whose magnitude depends upon how well the continuous counting locations represent nationwide traffic rates. HPMS is subject to estimating differences in the states, although FHWA works to minimize such differences and differing projections on growth, population, and economic conditions which impact driving behavior.

**Statistical Issues:** The estimate of the injury rate includes three main sources of uncertainty. The numerator count of injuries has a standard error of 5.1% (cf. Appendix C of *Traffic Safety Facts*). The denominator estimate of VMT contains both complex sampling and non-sampling errors. Based on data from 1994-2000, the annual variation in the injury rate has a regression standard error of 4.04.

The estimates of the number and percentages of persons injured in motor vehicle traffic crashes during 2001 are preliminary and are based on incomplete data and statistical models. NHTSA’s first official estimates for 2001, the Early Assessment, are being developed and will be completed in early April. Differences between the Official Early Assessment estimates and those in this report are to be expected.

**Verification & Validation:** Data are reviewed and analyzed by NHTSA’s National Center for Statistics and Analysis. Quality control procedures are built into annual data collection at 6 and 9 months, and at year’s end. A study was completed in 1993, looking at samples of FARS cases in 1989 through 1990 to assess the accuracy of data being reported. VMT data is reviewed by FHWA for consistency and reasonableness.

**Comment:** This data program has been in use for many years and is generally accepted for describing safety on the Nation’s highways. GES records injury severity in four classes: incapacitating injury, evident but not incapacitating injury, possible but not visible injury, and injury of unknown severity. Adjusting raw highway fatalities and injuries by VMT provides a means of portraying the changes in highway fatalities on a constant exposure basis – to facilitate year-to-year comparisons.

## Large truck-related injured persons

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<b>Measure:</b>	<b>Number and rate of injured persons involving large trucks. (CY) (2001)</b>
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**Scope:** The measure includes all injured persons (e.g., drivers and occupants of passenger cars, motorcycles, large trucks, or pedestrians) associated with crashes involving trucks with a gross vehicle weight rating of 10,000 pounds or more. The number of injured persons is derived from NHTSA's General Estimates System (GES). The injury rate is the number of injured persons per 100 million vehicle miles of large truck travel (VMT).

**Source:** NHTSA's General Estimates System (GES) provides injury data. VMT data are derived from the Federal Highway Administration's (FHWA) Highway Performance Monitoring System (HPMS).

**Limitations:** GES data are obtained from a nationally representative sample of 60 sites. The results provide only national data, not state-by-state data. Large truck VMT reported to FHWA by each state is based on a sample of road segments and is not a census. In addition, the methods used to calculate total VMT may vary from state to state. The methods used by the states to estimate the VMT contribution from rural and urban minor collectors are unknown.

**Statistical Issues:** The GES data have a standard error of 6.9% for injuries from truck and automobile crashes (cf. Appendix C of *Traffic Accident Reports*). They are less accurate than the corresponding fatality counts. Based on 1994-2000 data, the variation due to random chance in the number of injuries, which includes sampling variability, has a regression standard error of approximately 7,091. Because the VMT data provided to FHWA from each state are estimates based on a sample of road segments, the numbers have associated sampling errors. The methodology used by each of the states to estimate VMT is not known and may introduce additional non-sampling error into the estimates. Although states provide VMT estimates on an annual basis, they are only required to update their traffic counts at all sampling sites once every three years. Thus an annual VMT estimate from a particular state may be based, in part, on data collected during a previous year. Based on 1994-2000 data, the chance variation in a given year in the number of injured persons per 100 million vehicle miles of large truck travel has a regression standard error of 4.39.

**Verification & Validation:** Injury data are reviewed and analyzed by NHTSA's National Center for Statistics and Analysis. Quality control procedures are built into data collection and data processing. FHWA routinely works with state data providers to modify reported VMT values that do not appear reasonable before incorporating them into its final master file.

**Comment:** The data program has been around for many years and is generally accepted for describing safety on the Nation's highways. GES records injury severity in four classes: incapacitating injury, evident injury but not incapacitating, possible but not visible injury, and injury of unknown severity. The large truck VMT data used to calculate injured persons rates have both sampling and non-sampling (i.e., bias) error associated with it. The impact of these errors on FMCSA's estimates of large truck crash rates is considered to be minimal.

## Seat belt use

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<b>Measure:</b>	<b>Percentage of front occupants using seat belts. (CY) (2001)</b>
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**Scope:** The proportion of front seat outboard passenger vehicle occupants using shoulder belts during daylight hours.

- Source: Data for 1998, 1999, and 2000 are from the National Occupant Protection Use Survey (NOPUS). NOPUS is a National, multi-stage probability sample. In the first stage, counties or groups of counties (Primary Sampling Units or PSUs) were grouped by region (Northeast, Midwest, South, and West), level of urbanization (metropolitan or not), and level of belt use (high, medium, or low). Fifty PSUs were selected based on the vehicle miles of travel in those locations. In the next stage, a random sample of eight (8) Census Tracts was selected within each of the PSUs. In the final stage a sample of ten (10) roadway segments for all types of roads was selected within each Census Tract. In the even numbered years, shoulder belt use of front seat outboard (driver and right front seat) passenger vehicle (passenger cars, vans, sport utility vehicles, and pickup trucks) occupants was observed during daylight hours at each of the 4,000 sampled roadway segments. In 1999, a Mini-NOPUS consisting of observation at a subsample of 2,000 of the 4,000 roadway segments was conducted.
- Estimates of national shoulder belt use for other years shown in the graph are based on state belt use surveys. These surveys are conducted by most of the 50 States and the District of Columbia. For the years shown, these surveys varied in coverage, design, and observation methods. National averages were obtained by weighting the most recently provided state belt use estimate by the population of the state.
- Limitations: NOPUS data are based on a random sample of sites and, therefore, are subject to sampling error. For the estimate of overall National shoulder belt use from the 2000 NOPUS Survey, sampling error was estimated to be 1.4 percentage points. Additionally, observation of shoulder belt use is restricted to daylight hours.
- State belt use surveys have been conducted in many different ways. Less than half of the states conducted probability based surveys and the rest were based on other methods. Additionally, most states conducted surveys that observed use only for those occupants and vehicles covered by their state belt use law. After enactment of a grant program in the ISTEA of 1991, some 24 states had surveys that met design criteria specified by NHTSA.
- Statistical Issues: The primary source of uncertainty in NOPUS is sampling errors. The most recent estimate shown in this report is based on a probability sample, and the survey bias and reweighting are complex. For State surveys, uncertainty derives from disparities among the different surveys conducted by the states, the use of non-probability samples by many of the states, the differences in persons and vehicles observed, the differing methodologies and processes followed to collect data on the persons and vehicles observed, and the procedures used to estimate overall belt use. To compute the National average from state rates for a specific year, when a state did not conduct a survey or provide NHTSA with an estimate, the most recent rate provided by that state was substituted. Also, weighting state averages by population may have overstated the contributions of some states. Based on data from 1994-2000, the annual variation in the seat belt use rate has a regression standard error of 1.31 percent.
- Verification & Validation: NOPUS data collection is managed by a survey research contractor who has responsibility to hire and train the data collectors/observers. Before data collection begins, NHTSA reviews and approves all the training materials and Data collectors/observers must pass a 2-day training course. The data contractor also conducts on-scene "surprise" quality control visits to ensure that observations are made correctly and data are coded properly. Numerous edits are also employed in the data processing. NHTSA reviews the data provided by the contractor for consistency. NHTSA reviewed and approved the survey designs and data collection procedures for 24 states as a result of a grant program authorized by the ISTEA of 1991. NHTSA, however, did not conduct any quality review or validation of the data collection and estimation processes employed by the states during or after data collection for the years shown.
- Comment: None.

## Air carrier fatal accident rate

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Measure:	Fatal aviation accidents (U.S. commercial air carriers) per 100,000 departures. (FY)
Scope:	This measure includes both scheduled and nonscheduled flights of large U.S. air carriers (14 CFR Part 121) and scheduled flights of commuter airlines (14 CFR Part 135). It excludes on-demand (i.e., air taxi) service and general aviation.
Source:	Part 121 and Part 135 departure data is submitted to BTS under 14 CFR Parts 241 and 298, respectively. NTSB provides accident data.
Limitations:	The fatal accident rate in these categories is small and could significantly fluctuate from year to year due to the occurrence or non-occurrence of a single accident.
Statistical Issues:	The switch from calendar to fiscal year in 2001, combined with the use of departures rather than flight hours as the activity measure for the denominator, present new problems. The FAA has no independent data sources to validate BTS-collected departure data as it did with flight hour data. To overcome reporting delays of 60 to 90 days, FAA must rely on historical data, partial internal data sources, and Official Airline Guide (OAG) scheduling information to project at least part of the fiscal year activity data. Due to the reporting procedures in place, it is unlikely that calculation of future fiscal year departure data will be markedly improved. Lacking complete historical data on a monthly basis and independent sources of verification increases the risk of error in the activity data. The regression standard error for the annual variation in the fatality rate, based on data from 1994 – 2000, is 0.023.
Verification & Validation	The FAA does comparison checking of the departure data collected by BTS; however, FAA has no independent data sources against which to validate the numbers submitted to BTS. FAA compares its list of carriers to the DOT list to validate completeness of the reporting list and places the carriers in the appropriate category (i.e., Part 121 or Part 135). NTSB and FAA's Office of Accident Investigation meet regularly to validate the accident count.
Comment:	The joint government/industry group working on improving the level of safety for U.S. commercial aviation has determined that the number of departures is a better denominator measure to use for determining accident rates. In a recent report on the Safer Skies effort the Government Accounting Office agreed and recommended that the FAA use departures.

## General aviation fatal accidents

Page 21

Measure:	Number of fatal general aviation accidents. (FY)
Scope:	The measure includes on-demand (non-scheduled FAR Part 135) and general aviation. General aviation comprises a diverse range of aviation activities. The range of general aviation aircraft includes single-seat homebuilt aircraft, helicopters, balloons, single and multiple engine land and seaplanes including highly sophisticated extended range turbojets.
Source:	National Transportation Safety Board (NTSB).
Limitations:	The use of the 1996-1998 timeframe for the baseline represents one of the safest periods in general aviation history in terms of a decline in fatal accidents. The number of general aviation accidents reported in any given year might change in subsequent years. There are many reasons for these changes to the historical data. Primary among them is that the accident had not been reported to the NTSB, or that it was misreported and the information corrected at a later date.
Statistical Issues:	There is no major error in the accident counts. Random variation in air crashes results in a significant variation in the number of fatal accidents over time. The regression standard error in this variation for 1996 through 2000 is 16.5.

Verification & Validation: NTSB and FAA's Office of Accident Investigation meet regularly to validate the information on the number of accidents.

Comment: It would be preferable to use fatal accident rates rather than fatal accidents as the performance measure. However, general aviation flight hours are based on an annual survey conducted by the FAA. Response to the survey is voluntary. The accuracy of the flight hours collected is suspect and there is no readily available way to verify or validate the data. For this reason, the General Aviation community is unwilling to use a rate measure until the validity and reliability of the survey data can be assured.

## Operational Errors (Air Traffic)

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<b>Measures:</b>	<b>1. Operational errors per 100,000 activities, or per 1 million activities. (2001)</b> <b>2. Number of operational errors where less than 80 percent of required separation is maintained.</b>
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Scope: An error occurs when separation between aircraft is less than the separation determined necessary for the specific phase of flight. "Activities" are total facility activities, as defined in *Aviation System Indicators 1997 Annual Report*. Total facility activities are the sum of en route and terminal facility activities.

Source: FAA air traffic facilities have a software program called Operational Error Detection Patch (OEDP) that detects possible operational errors and sends alert messages to supervisory personnel. Facility management reviews OEDP alerts and data provided from the National Track Analysis Program (NTAP) to determine if an operational error has occurred. Controllers are required to report operational errors. The information is summarized in the FAA Air Traffic Operational Error and Deviation Database.

Limitations: There is a few months' lag in reporting data because of the need to investigate major incidents. The severity of errors is not measured. Minor errors such as a 4.5-mile rather than a 5-mile separation are counted in the same way as more serious errors. Data are available for 1994 and following years.

The DOT IG conducted an audit of reporting on operational errors. The IG believes that there is a potential for underreporting of operational errors, as some errors are self-reported. The FAA disagrees with this assessment because there are substantial penalties for not reporting an operational error.

Statistical Issues: There are no major sources of systematic error in the operational errors data that have been quantified. Again, random variation in operational errors results in a significant variation in the measured rates over time. The regression standard error in the operational error rate using 100,000 activities denominator and the 1 million activities denominator, based on 1994-2000 data, are .048 and .48, respectively.

Verification & Validation: FAA performs system checks and counts daily against reported data to ensure the accuracy of information reported.

Comment: In August 1998, the FAA discovered and corrected a misunderstanding of the procedures used in interpreting separation reported by the National Track Analysis Program and the data provided by the Operational Error Detection Patch. The corrected application of these procedures, while not affecting safety, has resulted in an overall increase in the number of errors reported between 4.6 and 4.9 miles separation (Standard separation in these cases is 5 miles).

## Runway incursions

Page 24

**Measures:** 1. Number of runway incursions. (FY) (2001)  
2. Number and rate (per 100,000 operations) of highest risk runway incursions.

**Scope:** Runway incursions are the result of ground collision hazards or loss of separation for aircraft in the process of taking off or landing. They are grouped in three general categories: operational errors, surface pilot deviations, and vehicle/pedestrian deviations. Incursions are reported and tracked at airports that have an operational air traffic control tower.

**Source:** Air traffic controllers and pilots are the primary source of runway incursion reports. The data is recorded in the FAA National Incident Monitoring System (NAIMS).

**Limitations:** Preliminary incident reports are evaluated when received. Evaluation can take up to 90 days.

**Statistical Issues:** There are no major sources of systematic error in quantified runway incursion data. The regression standard error in the reported number of incursions, based on 1994-2000 data, is approximately 15.4. Based on 1998 – 2001 data, the regression standard error for the number and rate of highest risk runway incursions are 8.8 and 0.01, respectively.

**Verification & Validation:** Surface incidents are reported in the Administrator’s Daily Bulletin at the beginning of each weekday. Surface incidents are evaluated to determine if they should be classified as incursions. Incidents are evaluated against the official runway incursion definition. The Air Traffic Runway Safety Program Manager, ATP-20, makes the final decision regarding runway incursions.

**Comment:** None.

## Mariner Rescue

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**Measure:** Percent of all mariners in imminent danger who are rescued. (FY)

**Scope:** Includes people in water; on shore; and aboard a vessel, offshore structure, pier, or vehicle that is in distress or in urgent need of assistance. The Coast Guard makes a final determination on scene whether there is imminent danger, based on criteria that include the nature of distress, the condition of the vessel, the people onboard, and the environmental conditions. Criteria for this decision are discussed in search and rescue doctrine publications.

**Source:** CG Search and Rescue Management Information System (SARMIS). Data is collected from Coast Guard field units that conduct search and rescue responses.

**Limitations:** It is probable that some number of imminent danger cases, and the associated lives, are not reported in SARMIS. This includes situations where no distress call was received by the Coast Guard and the persons in distress were rescued by private citizens or local government personnel, or where the persons in distress perished without trace. The extent of this under-reporting is not known. There is some judgment involved in assessing whether mariners are in danger. However, there is likely to be consistency in these assessments across years. 1994 data is skewed upward by a large surge of migrants interdicted at sea, most of whom were counted as “rescued,” thus increasing the percentage of lives reported as saved. Reporting no longer includes migrants interdicted; they are counted directly as migrants interdicted under law enforcement activity. Prior to the introduction of the next generation data system in October 2000, data entry was limited to closed cases, after a rescue has been successfully completed or after the recovery of a body. The new data system now allows missing bodies to be tracked. In this first year of data, more cases than expected were found where bodies were not recovered. Before adding this number into our data analysis, we will track this number to assure that this represents a data trend and not an unusual aberration. Errors may be introduced in SARMIS through data entry, but are likely rare for lives saved data elements.

**Statistical Issues:** The primary source of uncertainty consists of non-sampling errors. The second generation data system, brought on-line on October 1, 2000, reduces error due to miscoding through the use of more extensive drop down menus, machine generated case numbers, structured data boxes, and more extensive business rules eliminating the selection of data not consistent with other entered data. The regression standard error for year-to-year chance variation is 2.6 percent mariners rescued, based on data from 1994 through 2000.

**Verification & Validation:** SARMIS data entry system uses structured entry values, check boxes, and pull down selection lists to limit entry errors. The use of plain language descriptions eliminates a majority of erroneous data code selection. Additional system business rules also eliminate the selection of data not appropriate with other entered data. The SAR Mission Coordinator (SMC) is responsible for accurate entry of particular case data by all units involved in the case. CG Program Managers annually validate the data in SARMIS. Entries are reviewed at Coast Guard District offices as first step in validation – errors and inconsistencies are identified and corrected. Finally, Coast Guard Headquarters program managers review compiled data annually to assess consistency with historic variance and trends. This review includes curvilinear regression analysis to compare current data to historic data and a program review analysis to identify and resolve aberrations.

**Comment:** Beginning in FY01, this measure will cover all mariners in distress reported in SARMIS. The previous measure covered only mariners reported in distress that were rescued. The significance of the 87.5% result for FY99 is uncertain at this point; FY95-98 data show a flat trend at 84%. It is not known if the FY99 result was produced by anomalous factors, or if it is the product of program strategies and a changing external environment. Therefore, the goal target remains at 85% until more analysis is completed. For FY 2001, the preliminary estimate of the measure was 84.2 percent of all lives, bringing the percentage about equal to the average since 1995 and slightly below the goal, but certainly within normal variation about the average.

**Recreational boating fatalities**

<b>Measure:</b>	<b>Number of recreational boating fatalities. (CY) (2001)</b>
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**Scope:** Measure includes fatalities occurring aboard vessels that are being operated for recreational purposes. Surfboards, iceboats, and vessels engaged in sanctioned racing events are not considered recreational vessels. Fatalities are included if caused by a fire, explosion, sinking or other occurrence involving a recreational vessel, and the vessel or associated equipment caused or contributed to the fatality. Fatalities are not included if they occurred aboard a recreational vessel, but were caused by self-inflicted wounds or natural causes. Fatalities are also excluded if they occurred while the victim was engaged in other activity such as swimming or diving, where the vessel was used as a platform only and was not a contributing factor to the fatality. Beginning two years ago, the measure for Recreational Boating was revised by adding an additional 6% to the aggregate number of reported fatalities, to correct for an estimated 6% underreporting of recreational boating fatalities.

**Source:** Coast Guard Boating Accident Report Database (BARD). Data is entered into BARD by state administrators who collect data from boat owners and operators through formal Boating Accident Reports, as instructed in 33 CFR 173c.

**Limitations:** Fatality data is derived from reports submitted by the public along with accompanying state investigation reports. There is consensus among the Coast Guard, the states, safety professionals, and other researchers that most fatalities that occur on inland and most coastal waters are under-reported. To better quantify the extent of possible under-reporting the Coast Guard initiated and funded an analysis of BARD data conducted by the Boat Owners Association of the United States (BOAT/U.S.) Foundation for Boating Safety. The study found some fatalities involving recreational boating in the Coast Guard's Search and Rescue Management Information System (SARMIS) that were not in BARD. However, although the study reported a 9% discrepancy, further analysis revealed that some of these findings would not be reportable as recreational boating fatalities. There is also consensus that under-reporting exists for fatalities occurring offshore, and aboard U.S. recreational boats operating overseas. Also, although there are guidelines as to what constitutes a recreational boating fatality, there is still an element of interpretation at the state level in reporting fatalities. It is probable that the states do not always interpret the guidelines in the same manner. Overall, the best estimate indicates that total fatalities are currently under-reported by at least 6%.

**Statistical Issues:** The discrepancy between BARD and the Search & Rescue Management Information System (SARMIS) amounts to 6% of the total reports for those states covered by SARMIS. The numbers given in this report have been adjusted to correct the deficiency. Also, note that since the boating fatality counts are influenced by weather, gasoline prices and other external factors, annual chance variation should be large. Using data from 1994 to 2000, the annual variation in the number of fatalities attributable to random chance has a regression standard error of 50.7.

**Verification & Validation:** Fatality data in BARD is verified and validated by state boating administrators and Coast Guard program managers. At the end of the calendar year, the Coast Guard compiles state fatality data and sends a report to each state for confirmation. Both State and Coast Guard officials review the statistics, including sampling of cases to ensure guidelines for classifying fatalities were followed. Any discrepancy is reconciled jointly by the State and Coast Guard program manager.

**Comment:** Data are not normalized for increases or decreases in the number or usage of boats, which tends to limit data use in making comparisons over time. The number and usage of recreational boats has increased over the past 2 decades, while the raw number of fatalities has generally decreased.

The BOAT/US review of BARD data for 1993 through 1997 identified underreporting in BARD of 8% in 1993 and 1994, 12% in 1995, 13% in 1996 and 8% in 1997. The Coast Guard reviewed BOAT/US's findings for 1995, 1996, and 1997. Each record for these years was checked and fatalities that were incorrectly labeled as recreational boating fatalities by BOAT/US were removed from the count. Based on this revised count of recreational boating fatalities with mislabeled fatalities removed, the Coast Guard estimates that 7%, 8% and 4% of all recreational boating fatalities were not captured in its Boating Accident Report Database (BARD) in 1995, 1996 and 1997 respectively for purposes of this report. The median of these numbers – 6% - has been used to adjust recreational boating safety data for 1993, 1994, 1998 and 1999, and to reset the goals for 1999 through 2001. The original goal of 720 has been increased by 6% to 763 for 2000.

The Coast Guard is in the process of commissioning a comprehensive National Boating Survey to obtain valid and reliable information on boating practices, safety, and exposure. This information will enable safety officials to assess boating risk, implement appropriate safety intervention strategies, and measure the effectiveness of program activities in reducing the risk and negative outcomes associated with the use of recreational boats. Data from this study will be used to further address underreporting issues and estimate reporting discrepancies in BARD. The study was originally set to begin in Fall 2001, however data collection is now scheduled to begin in April 2002.

**Passenger Vessel Fatalities**

**Measure: Fatalities and rate (per million passenger capacity) aboard passenger vessels. (2001)**

- Scope:** This measure is an indicator of passenger safety. It includes reportable marine casualties resulting in the death or disappearance of a passenger aboard any U.S. vessel (regardless of type or location) or aboard foreign flag vessels in U.S. waters. Exceptions include death/disappearance of “non-passengers”, whenever the cause of death/disappearance is classified as being from diving, natural causes, (e.g. heart attack) or whenever the death/disappearance is the result of an intentional act (e.g. suicide, altercation). Fatalities on recreational vessels are not included for two principal reasons: Recreational vessels are prohibited from carrying “passengers” and recreational vessel fatalities are measured and reported separately.
- Source:** Passenger fatality source data is obtained from the Coast Guard Marine Safety Information System (MSIS). Passenger fatalities are reported to the Coast Guard as required by federal regulations. Sources of reports are most often vessel masters, operators, owners, insurance companies, legal representatives, and other mariners.
- Limitations:** The investigation, retrieval, analysis and reporting processes result in under-reporting for the most recent year, with the most significant effects over the most recent 5 months. Estimates are often used to compensate for this known data-lag. The Coast Guard initiates about 40-50 civil penalty cases for failure to report marine casualties, although many of these are for minor casualties. In addition, some passenger fatalities may not be reported to the Coast Guard. This number is unknown. Some passenger injuries may ultimately prove fatal and lead to death; some missing passengers may be found. These numbers may not be updated to reflect the changes in status. The number is believed to be small. Duplicate casualty entries are sometimes entered into MSIS, and some casualties are mistakenly omitted or coded incorrectly. Verification procedures strive to correct these errors, but it is probable that a small number are not corrected. The data retrieval & reporting processes do not allow automated distinction between all death types (e.g. natural vs. accidental). As a result, some natural deaths or suicides may be inadvertently included.
- Statistical Issues:** The major sources of uncertainty in this measure are the estimation error (as a result of the data-lag) and the reporting error (as a result of the inability to distinguish between which deaths should be included and which should be excluded).
- Verification & Validation:** Verification and validation occurs at several levels. Edit checks within MSIS software can detect some incorrect or missing data and force review and correction before data entry is completed. Selection lists for certain data fields also reduce the opportunity for data entry error. All investigations go through review at the field unit for accuracy. Investigations of serious marine casualties are also usually reviewed at district and headquarters offices. The headquarters Data Administration staff conducts periodic quality control checks to identify entry errors such as missing data or miscoding, and corrects any errors identified. Errors identified are referred to either the Data Administration staff or the Investigations and Analysis staff for correction.
- Comment:** During FY 2002, the Marine Safety Information System (MSIS) will be replaced by the Marine Information System for Safety and Law Enforcement (MISLE). While the new system will be a major improvement, it is expected to cause serious difficulties in making performance comparisons. One factor is that many business processes were re-designed in conjunction with system development. Another factor is that data quality under MISLE is expected to be superior to that of MSIS. While this represents improvement, it may cause near-term problems in making meaningful comparisons of data between the two systems.

## Rail fatality and Accident rates

Page 29 & 30

**Measure:** 1. Train accidents per million train-miles.  
2. Rail-related fatalities per million train-miles. (CY) (2001)

**Scope:** The fatality measure includes anyone on rail property, any on-duty railroad employee, and anyone killed by a train or its contents. It does not include fatalities on trains or rail lines that do not connect to the national rail network, such as mass transit operations, certain excursion and tourist railroads, and some industrial railroads not connected to the general system. The only railroad fatalities that are not counted are suicides (as determined by a public official) and death by natural cause not associated with railroad operations. Train accidents do not include those at grade crossings. They are reported under the performance goal for highway-rail grade crossing accidents.

**Source:** *Railroad Safety Statistics – Annual Report*. Statistical data, tables, and charts depict the causes and nature of rail-related fatalities. Data on fatalities and train miles are reported to FRA by railroad companies.

**Limitations:** Because of the scope of the reporting criteria, some fatalities that are counted are not associated directly with operation of the trains, and some railroad fatalities are not counted. This scope is consistent with the regulatory authority of the agency, but not consistent with other modes of transportation for comparative purposes.

**Statistical Issues:** The reported estimates are based upon partially reported data from 2001. Based on data from 1994-2000, chance variation from year to year, as reflected in the regression standard error, is 0.055 for rail fatalities.

**Verification & Validation:** Railroads are required by law to submit monthly accident/incident reports to FRA. They are also required to update any inaccurate or incomplete information. FRA conducts routine data audits (records inspections) to verify the adequacy of railroad reporting and record keeping requirements.

**Comment:** None.

## Highway - Rail grade-crossing accidents

Page 29

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

**Scope:** The measure includes all collisions with on-track equipment and highway users at public and private grade crossings.

**Source:** Collisions and train-miles are reported in FRA's *Railroad Safety Statistics – Annual Report*. Vehicle-miles-traveled (VMT) are obtained from the FHWA Office of Highway Information Management.

**Limitations:** Because the denominator includes all highway vehicle-miles-traveled (VMT), and not just VMT that are exposed to grade crossings, the rate portrayed may be lower than the actual risk.

**Statistical Issues:** Trains and automobiles have different exposures at rail crossings--the denominator used here attempts to combine these. The numerator is based on partially reported 2001 data. The annual variation by chance from year to year as measured by the regression standard error is 0.109, based on data from 1994-2000.

**Verification & Validation:** FRA's Office of Safety has a review process to ensure that railroads and the States comply with Federal reporting requirements in the preparation of the FRA *Railroad Safety Statistics - Annual Report*.

**Comment:** None

**Transit fatality and injured person rates**

**Page 30 & 31**

<b>Measure:</b>	<ol style="list-style-type: none"> <li><b>1. Transit fatalities per 100 million passenger miles traveled. (CY)</b></li> <li><b>2. Transit injured persons per 100 million passenger miles traveled. (CY)</b></li> </ol>
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**Scope:** The data include both riders and employees. A fatality is defined as a transit-caused death from collision, personal casualty, fire, derailment, or bus going off the road. An injury is defined as any physical damage or harm to a person requiring medical treatment caused by a transit collision, personal casualty, fire, derailment, or bus going off the road.

**Source:** FTA’s Safety Management Information System (SAMIS), with data reported by transit operators to the National Transit Database (NTB).

**Limitations:** Because of the scope of the reporting criteria, some fatalities that are counted are not associated directly with transit operation. This scope is consistent with the regulatory authority of the agency, but not consistent with other modes of transportation for comparative purposes.

**Statistical Issues:** The fatality and injury counts in SAMIS are generally quite accurate---the major source of error in the measure comes from uncertainty in the passenger miles traveled. Based on 1994-2000 data, the chance variation in a given year has a regression standard error of 0.039 for the transit fatality rates and 2.210 for the transit injury rates.

**Verification & Validation:** An independent auditor and the transit agency’s CEO certify that data reported to the NTD are accurate. Using data from the NTD to compile the SAMIS data, the Transportation Systems Center compares current safety statistics with previous years, identifies questionable trends, and seeks explanation from operators.

**Comment:** None.

**Pipeline failures**

**Page 33**

<b>Measure:</b>	<b>Excavation damages to natural gas and hazardous liquid pipelines. (FY)</b>
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**Scope:** This measure is based on reported hazardous liquid and natural gas accidents that meet federal reporting criteria as defined in 49 CFR 191.1 and 191.15 for natural gas transmission pipeline incidents and in 49 CFR 195.50 for hazardous liquid pipelines.

**Source:** RSPA’s Natural Gas Distribution and Transmission Incident Reports and Hazardous Liquid Pipeline Accident Reports. Failure reports are filed within 30 days of the occurrence of reportable incidents. Complete calendar year data are available by March 1 of the following year. Data may change as operators file supplemental reports.

**Limitations:** RSPA lacks adequate infrastructure information on pipeline operations and maintenance needed to fully characterize problems when they occur and lacks information on precursor conditions that contribute to incidents. RSPA seeks further improvements in data collection in 2002 to address these concerns.

**Statistical Issues:** Reduction in excavation damages is tied to economic growth and expansion as populations increasingly are encroaching on once rural areas where major interstate pipelines are located. Because of delays in mail delivery associated with 9/11/2001 terrorist activities, statistical close-out of the 2001 tally requires an extrapolation of number of reports anticipated for the last quarter of 2001.

**Verification & Validation:** RSPA reviews/verifies data provided for accuracy and requests supplemental reports where shortcomings are indicated.

Comment: RSPA discontinues this measure after 2002, replacing this safety measure with pipeline excavation damages measure.

## Pipeline failures

Page 34

<b>Measure:</b>	<b>Failures of natural gas transmission pipelines. (CY) (2001)</b>
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Scope: This measure is based on reported hazardous natural gas leaks that meet federal reporting criteria as defined in 49 CFR 191.1 and 191.15 for natural gas transmission pipeline incidents.

Source: RSPA's Natural Gas Transmission Incident Report. Failure reports are filed within 30 days of the occurrence of reportable incidents. Complete calendar year data are available by March 1 of the following year. Data may change as operators file supplemental reports.

Limitations: RSPA lacks adequate infrastructure information on pipeline operations and maintenance needed to fully characterize problems when they occur and lacks information on precursor conditions that contribute to incidents. Joint Federal, state and industry teams have been formed to devise a new course to improve information availability.

Statistical Issues: The number of failures of natural gas transmission pipelines is likely to be underreported. The annual variation in the number of failures from year to year due to chance has a regression standard error of 528 for natural gas pipeline failures based on data from 1994 to 2000.

Verification & Validation: RSPA reviews/verifies data provided for accuracy and requests supplemental reports where shortcomings are indicated.

Comment: None.

## Hazardous Materials Incidents

Page 36

<b>Measure:</b>	<b>Number of serious hazardous materials incidents in transportation. (CY)</b>
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Scope: Serious reported hazardous materials incidents were initially defined by RSPA to be those that result in a fatality or major injury (for most purposes, an injury resulting in hospitalization) due to a hazardous material, closure of a major transportation artery or facility, or evacuation of six or more persons due to the presence of a hazardous material, or a vehicle accident or derailment resulting in the release of a hazardous material. For the 2003 Plan, the definition is revised to include those incidents resulting in a fatality or major injury, the evacuation of 25 or more employees or responders or any number of the general public, the closure of a major transportation artery, the alteration of an aircraft flight plan or operation caused by the release of a hazardous material or the exposure of hazardous material to fire; plus any release of radioactive materials from Type B packaging, Risk Group 3 or 4 infectious substance, over 11.9 gallons or 88.2 pounds of a severe marine pollutant, or a bulk quantity (over 119 gallons or 882 pounds) of a hazardous material. This measure tracks only transportation related releases of hazardous materials that are in commerce. Volume of spills is not tracked, as this does not necessarily indicate risk.

Source: Hazardous Materials carriers report data to RSPA for entry into the Hazardous Materials Information System (HMIS).

Limitations: Data for all hazardous materials incidents is suspected of being incomplete due to under-reporting for minor incidents. Most reportable serious incidents are in the system, making this a more consistent measure for program management. However, it does not reflect all incidents. RSPA has issued an NPRM to revise the reporting system.

Statistical Issues: Although the number of incidents is likely to be underreported, such recording error is probably small in comparison to the annual variation due to chance. The annual variation in the number of failures (original definition) from year to year due to chance has a regression standard error of 37.2 based on data from 1994 to 2000. The new incident definition has a regression standard error of 30.6 based on data from 1997 to 2000.

Verification & Validation: RSPA verifies the data by periodic follow-up reviews of data entry by the manager of the Hazardous Materials Information System, and verification audits of the data entry process. RSPA crosswalks HMIS reports against the National Response Center log of accidents. RSPA is improving compliance with reporting requirements by correlating HMIS reports with FRA's Accident Report data and the HMIS telephonic data. RSPA is piloting and plans to incorporate procedures to correlate HMIS reports with FHWA's Safetynet Accident File data.

Comment: None.

## Details on DOT Measures of Homeland Security

### Aviation security

Page 41

<b>Measure:</b>	<b>1. Average waiting time in minutes for passengers in line for screening. (FY) 2. [Measure on passenger and baggage screening effectiveness.] (FY)</b>
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Scope: TBD

Source: TBD

Limitations:

Statistical Issues:

Verification & Validation:

Comment:

### Aviation Security

Page 42

<b>Measure:</b>	<b>Detection rate for explosive devices and weapons that may be brought aboard aircraft. (FY) (2001)</b>
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Scope: Machine performance test results, automated threat-image projection (TIP) and FAA field agent testing of aviation security screener proficiency to detect and resolve images or FAA test objects that simulate weapons and explosive devices in checked and carry-on baggage, or carried on the person through an airport security checkpoint.

Source: FAA Office of Civil Aviation Security Airport and Air Carriers Information Reporting System (AAIRS). Laboratory test results from the William J. Hughes Technical Center.

Limitations: No comment.

Statistical Issues: There is no major error present in the subject data.

Verification & Validation: Special "red team" testing led by agents based at FAA headquarters is used to validate field test results. AAIRS data is subject to multiple layers of review.

Comment: The White House Commission recommended more aggressive, realistic testing. Funding that began in 1997 enabled an increase in testing as more field agents were hired and trained. Prior to 1998, data from realistic testing were too sparse to be conclusive.

## Coastal and Seaport Security

Page 43

**Measure:** Percent of high interest vessels screened.

Scope: High Interest Vessel (HIV) inspection or escort is measured by the a ratio of the number of HIV vessel inspected or escorted to the number of HIV vessels arriving at US ports. HIV designation is determined using specific criteria. Coast Guard inspection or escort standards are to inspect 100% of HIV.

Source: The data for this measure is collected using a manual count from situation reports sent after a vessel inspection or escort.

Limitations: This is an interim activity-based measure. Appropriate outcome-based measures are under development that will improve our ability to measure and reduce security risks in US ports.

Statistical Issues: This is a new measure and data systems have not yet been developed or modified to capture this information. It is possible that errors in the data could result due to manual data collection.

Verification & Validation: Verification and validation is conducted through cross checks with situation reports.

Comment: None.

## Military Readiness

Page 44

**Measure:** Percentage of days that the designated number of critical defense assets (high endurance cutters, patrol boats, and port security units needed to support Defense Department operational plans) maintain a combat readiness rating of 2 or better. (FY) (2001)

Scope: Only high endurance cutters, patrol boats, and port security units that are designated as necessary for defense plans are included. The specific units required are classified.

Source: DOD Status of Readiness and Training System (SORTS) – Database used by the Coast Guard in applying DOD standards to its assets to determine a readiness score.

Limitations: SORTS uses a multi-factor matrix to calculate the readiness status. Although specific criteria are outlined for each factor, some judgment is required in applying criteria. Different units and personnel may apply standard criteria in slightly different ways depending on the nature of the unit's mission.

**Statistical Issues:** This particular performance measure in FY 2001 is based on readiness levels of two types of vessels, patrol boats and high endurance cutters, which have extremely different levels of readiness. In addition, a third resource, Port Security Units (PSUs), is measured for its readiness. PSUs are comprised of Coast Guard Reservists and Active Duty personnel, trained to protect foreign ports for expeditionary forces. The drastic change between FY 1999 and FY 2000 performance was caused in large part due to the fact that the requirement to report the Contingency Personnel Requirements List (CPRL) (the full wartime personnel strength requirement) in the unit SORTS report was waived for FY 2000 and subsequent years pending validation of personnel requirements that have changed due to new equipment and operational procedures. The Navy has been informed of this waiver and has not objected to reporting personnel strength using the less demanding Coast Guard standards for peacetime operations in view of the fact that Reserve Unit personnel are available to quickly bring Coast Guard units up to the full wartime personnel strength requirements in the event of a war.

**Verification & Validation:** Units self assess and report readiness using objective standards. Unit readiness is periodically validated through inspections, assistance visits, and in some cases training and assessment at Navy facilities. These assessments are conducted by external, field level commands (such as Coast Guard areas, districts, and groups).

**Comment:** Coast Guard will continue to reassess the overall adequacy of this measure.

**Strategic Mobility**

<b>Measure:</b>	<b>Percentage of DOD-required shipping capacity complete with crews available within mobilization timelines (FY)</b>
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**Scope:** As of March 2002, this measure is based on the material availability of 76 ships in the Maritime Administration’s Ready Reserve Force (RRF) and 115 ships enrolled in the Voluntary Intermodal Sealift Agreement (VISA) program, which includes 47 ships enrolled in the Maritime Security Program (MSP). A second factor pertinent to this measure is the availability of sufficient licensed and unlicensed mariners to operate the available ships. The performance measure represents the number of available ships (compared to the total number of ships in the RRF and VISA) that can be fully crewed within the established readiness timelines. While other Government (primarily Military Sealift Command) owned or controlled sealift type vessels are not included in this measure, they draw their crews from the same pool of mariners. Accordingly, the availability measure is adjusted to reflect expected requirements during the early stages of a military crisis.

**Source:** Material availability of ships: MARAD records (and reports to DOD) on the readiness/availability status of each RRF ship each month. Typical reasons why a ship is not materially available include: the ship is in drydock, the ship is undergoing a scheduled major overhaul, or the ship is undergoing an unscheduled repair. MARAD and DOD also maintain records of the sealift ships enrolled in the MSP and VISA and their crew requirements. Availability of mariners: Information on the available supply of licensed and unlicensed mariners is extrapolated from data received from the U.S. Coast Guard’s Merchant Mariner Licensing and Documentation (MMLD) system.

**Limitations:** The information on the available supply of licensed and unlicensed mariners is an estimate. Because the MMLD also does not contain all of the information on individual mariners contained in their paper records, and provides no information on the availability and willingness of individuals to accept a sealift position in an emergency, it does not provide sufficient assurance of mariner availability.

**Statistical Issues:** None

**Verification & Validation:** The MARAD Regional Offices (and contracted ship managers) monitor the condition and overall readiness of each assigned RRF ship to meet its DOD mission. When a ship is determined not capable of meeting its activation timeframe (mission), it is given one of several vessel condition ratings that are reported to DOD. The monthly report contains an explanation of the deficiency and an estimated date when the ship will become fully capable of meeting its mission. MSP contract performance is monitored throughout the year in order to assure proper payment of the MSP payment to the ship operators. Recently, MARAD attempted to validate mariner availability estimates by conducting a survey of the mariner population. A second survey is expected to commence in April 2002 to refine and improve the information needed to determine availability. Because the decision to serve is a matter of individual choice and is subject to change, MARAD intends to develop a plan for maintaining current information on mariner availability based on the results of the 2002 mariner survey.

**Comment:** None.

## DOD-designated port facilities

Page 47

<b>Measure:</b>	<b>Percentage of DOD-designated commercial strategic ports for military use that are available for military use within DOD established readiness timelines.</b>
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**Scope:** The measure consists of the total number of DOD-designated commercial strategic ports for military use that are assessed as able to meet DOD-readiness requirements on 48-hour notice, expressed as a percentage of the total number of DOD-designated commercial strategic ports. Presently there are 14 DOD-designated commercial strategic ports. Port readiness is based on monthly reports submitted by the ports and semi-annual port readiness assessments by MARAD in cooperation with other NPRN partners. The MARAD/DOD semi-annual port assessments provide data or other information on a variety of factors, including the following: the capabilities of channels, anchorages, berths, and pilots/tugboats to handle larger ships; rail access, rail restrictions, rail ramp offloading areas, and rail storage capacities; the availability of trained labor gangs and bosses; number and capabilities of available cranes; long-term leases and contracts for the port facility; distances from ports to key military installations; intermodal capabilities for handling containers; highway and rail access; number of port entry gates; available lighting for night operations; and number and capacity of covered storage areas and marshalling areas off the port.

**Source:** MARAD data are derived from monthly reports submitted by the commercial strategic ports and from MARAD/DOD semi-annual port assessments.

**Limitations:** Port readiness assessments were not made prior to 1995; therefore, data are available only for 1995 and later years. MARAD conducts a monthly survey of all strategic facilities to determine whether they meet the DOD availability requirement. This information is provided to MARAD as a self-assessment by the port agency that owns the facility. There is some degree of subjectivity in determining the availability of the port facilities. As part of the overall planning process, MARAD and DOD conduct semiannual visits to independently verify and reassess port capability and availability. The indicator is by definition a point-in-time judgment. The results of the monthly and semi-annual reports used to measure port readiness can vary in accordance with the intensity of commercial activity at a given port at the time of the assessment. Also, the monthly reports do not include the same level of detail as the semi-annual assessments, although MARAD is in continuous contact with port officials to minimize response error.

**Statistical Issues:** The measurement of port readiness is an overall measure derived from MTMC comments, monthly readiness reports, and semi-annual assessments. As such, it is a subjective measure.

**Verification & Validation:** The MARAD/DOD semi-annual port visits independently verify and reassess not only the DOD-designated facilities, but also the total capability of the commercial strategic port.

**Comment:** None.

**Sealift capacity**

**Page 48**

<b>Measure:</b>	<b>Ship capacity (in twenty-foot container equivalent units, or TEUs) available to meet DOD’s requirements for intermodal sealift capacity. (FY) (2001)</b>
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**Scope:** Includes the aggregate TEUs (or estimated square footage) of cargo capacity for ships enrolled in the Maritime Security Program (MSP) and Voluntary Intermodal Sealift Agreement (VISA).

**Source:** MARAD/USTRANSCOM database of the militarily useful sealift capacity for ships enrolled in the MSP and VISA programs, based on vessel capacity data obtained from the vessel operators.

**Limitations:** MARAD, DOD and operator data on vessel characteristics (e.g., deck strength in pounds per square feet, deck height, container stowage factors), which are used to determine the portion of a vessel suitable for carrying military cargo, are not always consistent. For example, the majority of ships in MSP/VISA are containerships, which normally are measured in TEUs; however, DOD generally measures surge sealift ships, most of which are Roll-on/Roll-off vessels, in square feet. Historical data prior to FY 1997 are unavailable since the MSP and VISA programs were not enacted until that year.

**Statistical Issues:** None.

**Verification & Validation:** MARAD works with DOD and the maritime industry to use the most accurate information. MARAD validates the vessel capacity data, which are obtained from the vessel operators, through comparisons with internationally recognized databases of vessel characteristics (such as Lloyd’s Register data), vessel trim and stability information, stowage plans and other cargo loading documents.

**Comment:** None.

**Ready Reserve Force (RRF) activation**

**Page 49**

<b>Measure:</b>	<ol style="list-style-type: none"> <li><b>1. Percent of RRF no-notice activations that meet assigned readiness timelines. (FY) (2001)</b></li> <li><b>2. Percent of days that RRF ships are mission-capable while under DOD control. (FY) (2001)</b></li> </ol>
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**Scope:** DOD conducts no-notice exercises, called “Turbo-Activations,” annually to assess RRF activation readiness. The USTRANSCOM, via MSC, randomly selects and orders the activation of a number of RRF ships on an annual basis to test their capability to be ready-for-sea (i.e., mission-capable) within their assigned readiness timeframes of 4, 5, 10, or 20 days.

**Source:** MARAD maintains a database on the number of days it takes to activate each RRF ship and its operational reliability. The MSC activation order is received either by phone call or message. Documents produced during the no-notice activation period comprise the data source for determining the amount of time taken to activate each ship. Non-performance time is based on the MSC Casualty Reporting (CASREP) system, which identifies casualties that are of a severity to prevent the ship from performing the mission. These messages are passed from the ship’s Captain to MSC, the Ship Manager, and MARAD. The reliability of activated RRF ships is measured as the percent of days that RRF ships are mission-capable while under DOD control. Mission-capability is determined, in part, by the number of days it takes to repair a ship that has become inoperative. For example, the low percent of mission capability in 1997 (95.2) was the result of one ship being out of service for 156 days while undergoing repairs.

**Limitations:** None.

**Statistical Issues:** Since the population of vessels covered by these measures often consists of a very small number of vessels (as low as 13 vessels in FY 2000), a large swing in results can occur from just one ship not being available on time or one ship having operational problems.

**Verification & Validation:** The source of the activation data is the actual activation order from DOD to MARAD and the documents produced during a no-notice activation. These fix the actual time of call-up and the time when the vessel is "Ready for Sea" (or tendered to MSC). The Ready for Sea time is agreed to by MARAD and the on-board MSC representative and reported to DOD by official message. The time taken to activate each ship is maintained in the ship's logbook and in official DOD, MSC, and MARAD records.

The collection of data regarding mission capability under MSC operational control starts when MSC officially accepts delivery of RRF ships with date and time documentation. The Captain of the ship reports all problems that are of a severity to prevent the ship from performing its mission to MSC, the Ship Manager, and MARAD. The Captain also reports when the problem has been corrected. This information is entered by MSC into its CASREP system.

## Mariner availability

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<b>Measure:</b>	<b>Of the mariners needed to crew combined sealift and commercial fleets during national emergencies, the percent of the total that are available. (FY) (2001)</b>
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**Scope:** The pool of licensed and unlicensed mariners consists of mariners that have had sea service on U.S.-flag oceangoing merchant vessels over 1,000 gross tons within five years. The mariner pool includes licensed and unlicensed actively sailing mariners and inactive mariners, employed shoreside, who have the necessary skills and retain the appropriate license/rating to operate sealift ships, defined by shipboard position and U.S. Coast Guard certification. This pool is then compared to the DOD and commercial manpower requirements to determine sufficiency of the labor force. Only oceangoing merchant vessels over 1,000 gross tons are considered because mariners on these vessels have skills required for emergency sealift operations. The targets are based on a sealift operation that extends beyond 6 months, necessitating relief for the mariners who were sailing at the start-up of the operation.

**Source:** U.S. Coast Guard Merchant Mariner Licensing and Documentation (MMLD) system. The Coast Guard is the lead Federal agency for regulating, licensing, and documenting professional merchant mariners. MMLD provides information on both actively sailing mariners and inactive mariners, including their skill level and seafaring employment.

Lloyd's Maritime Information Systems. MARAD obtains information to track the use of U.S.-flag commercial ships active in international trade and projects the size of the active, ocean-going, commercial fleet. The size of this fleet has a direct correlation to the size of the commercial pool of mariners, based upon commercial crewing rules.

MARAD/DOT Mariner Survey. New for FY 2001, a random sample of mariners with current qualifications is now being surveyed, in conjunction with the Bureau of Transportation Statistics. The Survey will provide a more accurate determination of the number of currently qualified mariners as well as information on mariner availability for sealift employment during national defense emergencies.

**Limitations:** The size of the active and inactive mariner pool can be estimated from the MMLD. MARAD integrates these data into its own system for analysis and reporting. Because the MMLD does not contain all of the information on individual mariners contained in their paper records, and provides no information on the availability and willingness of individuals to accept a sealift position in an emergency, it does not provide sufficient assurance of mariner availability.

**Statistical Issues:** The primary area of uncertainty lies within the MMLD system, which MARAD uses to define the population of available mariners. While the accuracy of the data continues to improve as all licenses and documents are now on a five-year renewal cycle, gaps still exist in the database. Because the MMLD system was not designed to contact mariners, address and telephone information in the system is incomplete and out-of-date. Also, operators of some large oceangoing vessels are not required to report mariner employment to the USCG, and evidence of sea service provided by individual mariners to fulfill requirements for upgrading their rating is not entered in the MMLD.

**Verification & Validation:** The MMLD system is currently the only source of electronic data on mariner qualifications and employment. MARAD continues to work with the USCG to improve the MMLD system. The new MARAD/DOT Mariner Survey data will be used to estimate the number of qualified mariners available and willing to support seafaring crewing positions. Because this determination is a matter of individual choice and is subject to change, MARAD intends to develop a plan for maintaining current information on mariner availability based on the results of the Survey.

**Comment:** None.

**Drug interdiction**

**Measure: Amount of drugs seized or destroyed at sea (metric tons). (FY)**

**Scope:** Total amount of drugs (cocaine, marijuana, hashish, heroin, etc.) seized, jettisoned, or destroyed at sea by the United States Coast Guard. Cocaine currently constitutes the largest drug threat to the U.S., but the Coast Guard seeks to interdict all illegal narcotics moving by non-commercial maritime conveyances.

**Source:** The amount of drugs seized is measured by Coast Guard crews and reported through the Coast Guard Law Enforcement Drug Interdiction Data Base. Seizures are officially credited to the Coast Guard via Federal Drug Identification Numbers (FDINs) and are recorded in the federal Consolidated Counter-Drug Data Base, which is administered by the U.S. Interdiction Coordinator (USIC).

**Limitations:** It is possible that non-entry, duplication, and coding errors are present in seizure amount data; however, the chance of this error is small.

**Statistical Issues:** None.

**Verification & Validation:** Verification and validation occurs in several places in the data reporting and collection process. Data entry software helps ensure data quality and consistency by employing selection lists and logic checks. Internal analysis and review of published data by external parties help identify errors. CG data is further reviewed at a quarterly Consolidated Counter-Drug Data Base Conference, where all agencies that input data into the database review all agency data for consistency and accuracy.

**Comment:** This measure aligns with the goals contained in the President’s National Drug Control Strategy.

**Measure: Seizure rate for cocaine that is shipped through the transit zone. (FY) (2001)**

**Scope:** Seizure rate is a measure consisting of the amount of cocaine seized by the Coast Guard divided by the noncommercial maritime cocaine flow, expressed as a percentage. Noncommercial is defined as any vessel or aircraft not engaged in port-to-port transfer of cargo/passengers for the primary purpose of business profit. Examples are pleasure craft, fishing vessels, offshore work-boats, or freighters carrying cargo as a means of disguising illegal drugs.

**Source:** The amount of cocaine flow shipped by non-commercial means through the transit zone is estimated in the Interagency Assessment of Cocaine Movement (IACM) published by the Office of National Drug Control Policy (ONDCP). The amount of cocaine seized is measured by Coast Guard crews and

reported through the Coast Guard Law Enforcement Information System.

**Limitations:** It is probable that non-entry, duplication, and coding errors are present in seizure amount data (numerator); however, this error is likely to be small. The cocaine flow amount (denominator) is estimated through a complex process using many different sources of information. Due to the secretive nature of the illegal drug trade, cocaine flow estimates may contain significant errors. The size of this error may vary from year to year; the extent of this is not known. The estimation process changes slightly each year as improvements are made, so year-to-year comparisons of the flow are not completely consistent. The accuracy of the official cocaine flow estimate has been questioned by some individuals and organizations outside of government that have an interest in U.S. drug policy. ONDCP continuously attempts to refine this estimate to improve the measurement of interdiction activities. This measure only addresses cocaine; formal flow assessments do not exist for other major drugs. This measure is not designed to include cocaine shipped by commercial means such as large container vessels; however, it is probable that a small amount of cocaine included in the numerator is actually related to commercial shipping. This distinction between commercial and noncommercial is better for program management; at-sea interdiction of commercially conveyed cocaine, particularly when shipped in containers, is extremely difficult, and not the focus of the Coast Guard program.

**Statistical Issues:** The primary source of uncertainty in estimating seizure rate for cocaine is the denominator. Although the numerator estimate of cocaine seized is relatively accurate, the estimate of the amount shipped in the denominator is far more variable. The regression standard error for year-to-year chance variation in the cocaine seizure rate is 4.0 percent, based on data from 1995 through 2000.

**Verification & Validation:** Verification and validation occurs in several places in the data reporting and collection process. Data entry software helps ensure data quality and consistency by employing selection lists and logic checks. Internal analysis and review of published data by external parties help identify errors.

**Comment:** This measure is consistent with the goals contained in the President’s National Drug Control Strategy.

**Migrant interdiction**

<b>Measure:</b>	<b>Interdict and/or deter at least 87 percent of undocumented migrants who consider attempting to enter the U. S. via maritime routes. (FY)</b>
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**Scope:** Measure includes Cuban, Dominican, Haitian, and Chinese migrants, as these are the primary groups using maritime channels and the groups for which formal flow estimates exist. Success rate is the estimated number arriving by maritime channels divided by those that pose a threat of migration (estimated intent). The interdiction rate is just 1 minus the success rate.

**Source:** Data is obtained from Coast Guard and from the Immigration and Naturalization Service (INS). Estimates of migrants who successfully arrive and estimates of those with a high potential for undertaking the voyage are derived (with a consistent methodology) from investigations of incidents, interviews of detainees, and intelligence gathering. Sources for this information are the Coast Guard, INS, and other authorities.

**Limitations:** The numbers of illegal migrants entering the U.S., and the numbers of potential migrants, are derived numbers subject to estimating error. Because of the speculative nature of the information used, and the secretive nature of illegal migration, particularly where professional smuggling organizations are involved, the estimated potential flow of migrants may contain significant error. The measure only tracks four migrant groups at this time. A small number of migrants (approximately 10%) from various source countries are not included because formal flow estimates of migrants leaving these countries are not available. Using the number of potential migrants in the denominator helps address the deterrence value of Coast Guard operations, but could lead to confusion of this measure with a simple interdiction rate. Trend information prior to 1995 is not available.

**Statistical Issues:** The primary source of uncertainty in estimating the success rate for undocumented migrants is the denominator, which is an estimate of the flow of migrants, both documented and undocumented.

**Verification & Validation:** The numbers of migrants reaching the U.S. via maritime routes and the number of “potential migrants” are estimated. Methodologies and data are continuously reviewed. The Coast Guard has developed the estimation techniques that support this indicator over the last six years in order to more consistently use intelligence information. They are seeking independent assessment of the methods, and look to improve the process in the future.

**Comment:** Partly because maritime threats of illegal migration have come from a limited number of sources, the Coast Guard and others have developed quantified threat estimates to better manage interdiction. Over the past six years, estimation techniques have been improved to remove as much subjectivity and inconsistency as possible. It should be noted that past information reflects the success of intentional illegal activity. While some DOT measures allow accurate projection of likely future outcomes, the highly variable nature of illegal migrant activity limits the ability to project future outcomes based on performance in the immediate past.

**Critical transportation infrastructure protection**

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**Measure: Of those who need to act, percent who receive threat information within 24 hours. (FY) (2001)**

**Scope:** Threat information, in this context, is defined as credible information (both time-sensitive/action-oriented and informational) received by the Intelligence Community, analyzed by OIS and distributed in the form of a Transportation Security Information Report, generated by OIS for distribution by the Operating Administrations (OAs). Figure is derived from the percentage of transportation security officials and industry representatives that receive threat information from OIS through the OAs within the 24-hour period. Security representatives and officials will be randomly sampled by OIS within 48 hours of information dissemination and asked if and how soon they received the subject material.

**Source:** Internally prepared. Survey conducted by OIS of both DOT personnel and industry security contacts.

**Limitations:** Data: Relies on the reporting of the customers and consumers of this information. Reporting could be skewed to reflect positively on the dissemination process within the Operating Administrations.

**Indicator:** This measure only identifies whether there are possible breakdowns and bottlenecks in the dissemination process. It does not identify where those breakdowns specifically may be in the dissemination chain.

**Statistical Issues:** Since these data are collected through a sample survey, they are subject to sampling and non-sampling errors.

**Verification & Validation:** Customers will be randomly surveyed at all levels within the dissemination process, not solely the end users. Consequently, the reporting of dissemination times and officials who are in receipt of the information can be crosschecked for verification and validity of data.

**Comment:** None.

**Energy Efficiency**

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**Measure: Transportation-related petroleum consumption (in quadrillion BTUs) per trillion dollars of Real Gross Domestic Product (GDP). (CY) (2001)**

**Scope:** Measure includes primary consumption of petroleum for transportation, in quadrillion BTUs. This does not account for petroleum-produced electricity that is used in transportation; however, this is less than 1% of petroleum use. Petroleum use is normalized to real GDP, in constant 1996 dollars.

**Source:** U.S. Department of Energy *Annual Energy Review 1999* and *Annual Energy Review 2000*.

- Limitations:** Energy consumption does not include petroleum-produced transportation electricity. Measure does not capture the fraction of this petroleum use that is imported, nor does it capture actual energy efficiency (BTUs per passenger-mile-traveled).
- Statistical Issues:** These data are external to DOT. They are subject to both sampling and nonsampling errors. Based on 1994-2000 data, chance variation from year to year in the transportation energy efficiency measure has a regression standard error of 0.016.
- Verification & Validation:** Data is taken from external sources, which conduct their own verification and validation.
- Comment:** Petroleum use is normalized to the nation's real GDP in order to capture the nation's economic exposure to petroleum use in transportation. Beginning in 1999, the GDP baseline was changed from constant 1992 dollars to 1996 dollars.

## Details on DOT Measures of Mobility and Economic Growth

### Highway infrastructure condition

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<b>Measure:</b>	<b>Percentage of travel on the National Highway System (NHS) meeting pavement performance standards for acceptable ride. (CY)</b>
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**Scope:** Data include vehicle miles traveled on the HPMS reported NHS sections and pavement ride quality data reported using the International Roughness Index (IRI).

IRI is a quantitative measure of the accumulated response of a "quarter-car" vehicle suspension experienced while traveling over a pavement.

Vehicle Miles of Travel (VMT) represent the total number of vehicle miles traveled by motor vehicles on public roadways within the 50 states and Washington, D.C.

**Source:** Data collected by the State Highway Agencies and reported to FHWA for the Highway Performance Monitoring System (HPMS). They are obtained from calibrated measurement devices that meet industry set standards. Measurement procedures are included in the HPMS Field Manual.

VMT is a calculated product of the annual average daily traffic (AADT) and the centerline length of the section for which the AADT is reported. In the HPMS, travel is accumulated for each universe section to develop appropriate totals for the higher functional systems. AADT is required for each section of Interstate, NHS, and other principal arterial; as a result, travel is computed for these functional systems on a 100-percent basis. For minor arterial, rural major collector and urban collector systems, travel is calculated from samples using the AADT, centerline length reported for each sample section and the HPMS sample expansion factor for each section. Travel for the NHS on all functional systems is computed from the universe AADT data.

For the most part, travel for the rural minor collector and rural/urban local functional systems is calculated by the States using their own procedures and is provided in HPMS on a summary basis. Some States use supplemental traffic counts outside of the HPMS procedures; others employ estimating techniques, such as fuel use, to determine travel on these systems. In general, these methods are used in both rural and urban areas, including the donut areas of nonattainment areas to meet Clean Air Act requirements.

**Limitations:** IRI data for the approved NHS exist from 1995 onward. Past data (1993 and 1994) contain some variation as this data was on the proposed, rather than the existing NHS. No NHS IRI data are available prior to 1993. The HPMS requires States to report IRI data every two years; however, following the requirements is not mandated, but voluntary.

VMT estimates reported via the HPMS should be of reasonable quality particularly for the higher order functional systems. AADT and travel data are edited by the HPMS software for unusual values and for unusual changes to previously reported values. FHWA routinely works with State data providers to modify reported AADT values that do not appear to be reasonable before final use. Although AADT is required to be updated annually in HPMS, counts are only required to be updated on a 3-year cycle. For any reporting year, AADT for uncounted sections is usually derived by factoring the latest year's count for those sections.

**Statistical Issues:** The major source of error in the percentages is probably the sampling error from selecting the segments of highway tested for smoothness.

VMT data are subject to sampling errors, whose magnitude depends on how well the locations of the continuous counting locations represent nationwide traffic rates. HPMS is also subject to estimating differences in the states, even though FHWA works to minimize such differences and differing projections on growth, population, and economic conditions which impact driving behavior.

**Verification & Validation:** FHWA validates the data based on consistency reviews. States that follow the HPMS sampling instructions in developing traffic counting programs (Appendix F in the HPMS Field Manual) and the practices advocated in the Traffic Monitoring Guide have adequate counting and classification tools to prepare quality AADT and travel estimates for HPMS. The consistency of the sampling and counting procedures should also provide comparable State-to-State traffic data.

**Comment:** None.

<b>Measure:</b>	<b>Percentage of miles on the National Highway System (NHS) that meet pavement performance standards for acceptable ride. (CY) (2001)</b>
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**Scope:** International Roughness Index (IRI) is compiled annually for every section of the NHS, using data reported from the States.

**Source:** Data collected by the State Highway Agencies and reported to FHWA for the Highway Performance Monitoring System (HPMS). They are obtained from calibrated measurement devices that meet industry set standards. Measurement procedures are included in the HPMS Field Manual.

**Limitations:** IRI data for the approved NHS exist from 1995 onward. Past data (1993 and 1994) contain some variation as this data was on the proposed, rather than the existing NHS. No NHS IRI data are available prior to 1993. The HPMS requires States to report IRI data every two years; however, following the requirements is not mandated, but voluntary.

**Statistical Issues:** The major source of error in the percentages is probably the sampling error from selecting the segments of highway tested for smoothness. The annual variation in the percentage due to chance has a regression standard error of approximately 0.44 percent based on data from 1995-2000.

**Verification & Validation:** FHWA validates the data based on consistency reviews

**Comment:** None.

## Highway bridge condition

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Measure:	Percentage of deficient bridges on the NHS. (CY) (2001)
Scope:	Measure includes the number of deficient (structurally deficient and functionally obsolete) bridges on the NHS functional system divided by the total number of NHS bridges in the inventory, expressed as a percent.
Source:	Bridge information is collected by State DOTs and other bridge owners and provided to FHWA annually for inclusion in the FHWA maintained National Bridge Inventory (NBI).
Limitations:	NBI includes information on all 114,567 NHS bridges. States are required to update the system annually, but many States update quarterly. The system contains 95 data items for each of the bridges, and 20 of these items relate to bridge condition and appraisal. There are specific instructions as to how to assess bridges based on these items, including a grading scale from 0 to 9 with specific definitions and specific criteria to follow
Statistical Issues:	Even with the item specific grading system, differences in the grading between individual inspectors and between inspection days are probably the largest component of variation in the percentages. Based on 1994-2000 data, the estimated regression standard error for year-to-year variation in the percentages due to chance is approximately 0.65 percent.
Verification & Validation:	DOT evaluates accuracy and reliability of the submitted NBI information through data checks and field reviews by both Headquarter and field office personnel. This is done as a part of FHWA's NBI, the National Bridge Inventory System (NBIS), and Highway Bridge Replacement and Rehabilitation Program. Evaluation of the State's compliance with the NBIS most often includes a sample of bridge inspection reports and a comparison of condition data with field visits to the bridge site. In addition, there is an edit update program that identifies potential data errors in the NBIS.
Comment:	None.

## Appalachian highway system

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Measure:	Miles of the Appalachian Development Highway System (ADHS) completed. (FY) (2001)
Scope:	Measure includes actual miles completed on the 3,025 mile ADHS, within 13 member States.
Source:	States submit annual status updates on ADHS miles completed within their State each fiscal year to the Appalachian Regional Commission (ARC). The ARC compiles the data.
Limitations:	This is an output measure.
Statistical Issues:	None.
Verification & Validation:	Completed by ARC.
Comment:	ARC estimates that the TEA-21 funding level will result in completion of approximately 37 additional miles each FY 1999 through 2003.

## Highway congestion

Page 60 & 61

<b>Measure:</b>	<b>1. Of total annual urban-area travel, percentage that occurs in congested conditions (CY)</b> <b>2. Of annual urban-area peak period travel time, additional percentage of travel time attributable to congestion, (CY) (2001) and</b> <b>3. For the individual traveler in urban areas, average annual hours of extra travel time due to delays. (CY) (2001)</b>
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**Scope:** Scope: Data for the three measures below stemmed from approximately 400 urban areas. The data reflects the travel conditions of the freeway and principal arterial street networks.

**Definitions:**

1. Urban area: Developed area with a density of greater than 1000 persons per square mile.
2. Congested travel: Traveling below the posted speed limit(s).
3. Peak Periods: (Applicable to Travel Time Measure only. Congested Travel and Traveler Delay represent daily travel.) Monday-Friday morning and evening rush hours when slow speeds (below posted speed limits) are more likely to occur. The length of peak periods varies, e.g., large urban areas are typically longer. The Travel Time Measure accounts for the variations.
4. Delay: Extra travel time due to traffic volume and /or incidents.

**Source:** Data collected and provided by the State Departments of Transportation from existing State or local government databases, including those of Metropolitan Planning Organizations. The Federal Highways Administration's Highway Performance Monitoring System serves as the repository of the data. The Texas Transportation Institute utilizes HPMS data to derive the above measures.

**Limitations:** We have gathered data up through 2000. We anticipate having 2001 data on/about Nov. 2002. The proportion of congested travel figures used in calculating the measures are computed rather than measured values. The computed values may understate congestion, as delay from incidents is not calculated. Performance evaluation is process-oriented. Transportation programs that help combat highway congestion possess outcome-oriented, objective methods within the specific program areas; however, the causal relationship between the programs and overall highway congestion is inconclusive.

**Statistical Issues:** Methodology used to calculate performance measures has been developed by the Texas Transportation Institute and used in their annual Mobility Study. A detailed description of TTI's methodology is best described on their website at <http://mobility.tamu.edu/>.

**Verification & Validation:** State-reported HPMS data are reviewed by FHWA for completeness, consistency, and adherence to reporting guidelines. When necessary, and with close State cooperation, data may be adjusted to improve completeness, consistency, and uniformity.

**Comment:** In the FY 2000 Performance Plan, we used hours of delay per 1,000 vehicle miles traveled (VMT) to measure this goal. This metric attempted to provide a system-wide measure of congestion. However, it represented only one dimension of congestion – delay -- and did not effectively reflect the actual performance of the highway system in places where congestion regularly happens, i.e., the measure showed delay decreasing nationwide when in fact congestion was worsening in urban areas. Moreover, the measure was difficult to interpret by the general public. Based on discussions with our partners and customers, we replaced this indicator with three new measures: Congested Travel, Travel Time, and Traveler Delay. Together, these new indicators will reflect changing travel conditions more comprehensively by focusing on three different aspects of inefficient road performance in a broad collection of urban areas across the nation where congestion regularly occurs. The data supporting the three new measures stem from the Highway Performance Monitoring System (HPMS). The availability of the data is approximately 9 months from the base year, e.g., 2001 actual numbers will not be available from HPMS until Sep/Oct 2002. To accurately and reliably manage the transportation system, real-time (minute-by-minute) measurement of system speeds is needed and can only be achieved with automated instrumentation. As the Intelligent Transportation System network is put in place, reliability will become a barometer of this strategic goal. Ten cities have been identified with sufficient instrumentation to permit the development of a reliability measure. This is a first step in migrating from HPMS data to real-time, ITS-based data.

## **Intelligent Transportation Systems integrated deployment Page 61**

<b>Measure:</b>	<b>Number of metropolitan areas where integrated ITS infrastructure is deployed. (FY 2001)</b>
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**Scope:** The level of integrated deployment in 75 of the nation's largest metropolitan areas has been established using a set of indicators that consider two factors: (1) How much ITS infrastructure is in place at each metropolitan area; and, (2) How much integration is going on at each area. The process for determining the level of "component" deployment in a metropolitan area employs a set of indicators that measure the magnitude of deployment for selected ITS components. These are typically expressed as a ratio of actual deployment divided by the total possible, for example the number of freeway miles under electronic surveillance divided by the total freeway mileage. Components are considered deployed once the level of deployment attains a specified threshold level based on the indicators. Integration is defined as the sharing of data between agencies associated with the different jurisdictions responsible for ITS infrastructure. Typically there are three: State DOTs responsible for management of freeways and incident management programs; city governments, which manage most of the traffic signal systems; and public transit authorities, which manage most bus and rail services. The level of integration is determined by the extent that these three major transportation organizations employ technology to share and use transportation data to increase system capacity. Two examples of integration are: 1) a city traffic signal system receiving data from the state freeway management center about the queues at freeway ramp meters and then adjusting the signal timings on the arterial streets, or 2) a transit agency providing the state freeway management center with the real-time location of the buses so that freeway speeds can be determined. Metropolitan areas are rated as low, medium, or high separately for deployment and integration and then assigned an overall combined rating. An overall score of medium or high meets the goal for a metropolitan area.

**Source:** Metropolitan ITS Deployment Tracking Database developed by the Oak Ridge National Laboratory for the ITS Joint Program Office. Data are collected by means of surveys from designated metropolitan areas.

**Limitations:** This indicator is designed to track and encourage basic steps toward component deployment and systems integration. However, it does not reflect the full breadth of deployment or integration activities. For example, while it establishes the existence of basic integration of essential components, it does not confirm that all possible or desirable integration links exist in a metropolitan area. Similarly, the attainment of a deployment threshold only confirms a substantial commitment to the use of ITS technology but does not indicate that all needed deployment is complete.

Statistical Issues: These data come from sample surveys that, like all sample surveys, contain sampling and non-sampling errors.

Verification & Validation: The DOT Joint Program Office reviews deployment tracking indicators and methodology. Results are distributed to DOT headquarters and field staff as well as to state and local survey responders for confirmation of accuracy and completeness before the final reports are issued. Independent experts in statistics and transportation review procedures for survey construction and data collection prior to each survey iteration. A steering committee of Federal, state, and local transportation officials review and approve changes to methodology and indicators prior to implementation.

Comment: The FY 1997 baseline is 36 areas.

**Transit ridership**

<b>Measure:</b>	<b>1. Billion transit passenger miles traveled. (CY) (2001)</b> <b>2. Average percent change in transit passenger-miles traveled per transit market. (FY)</b>
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Scope: Includes revenue-passenger miles on publicly sponsored bus, transit rail, commuter rail, ferry, and vanpools in urbanized areas.

Source: National Transit Database (NTD), with information gathered from transit operators.

Limitations: Data is self-reported by transit agencies using an FTA-approved sampling methodology. Although most data is reported in the National Transit Database each year, sample cycles may be annual, every three years, or every five years depending on the size of the urban area and the number of vehicles operated. Ridership is an outcome indicator that reflects a variety of factors, including the capital investment of the Federal Government. Ridership is also influenced by operational decisions of transit authorities, and the availability and cost of alternative modes of transportation.

Statistical Issues: The sources of uncertainty include sampling error, annual chance variation, and auditing issues. The regression standard error from 1994-2000 indicates that the magnitude of the combination of the first two sources of error is approximately 0.67.

Verification & Validation: An independent auditor and the transit agency’s CEO certify that data reported to the NTD are accurate. FTA also compares data to key indicators such as vehicle revenue miles, number of buses in service during peak periods, etc.

Comment: None.

<b>Measure:</b>	<b>Percentage of transit grants obligated within 60 days after submission of a completed application.</b>
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Scope: FTA grants obligated during a fiscal year period for major programs: Urbanized area, non-Urbanized area, and Elderly and Persons with Disabilities formula grants; Capital grants; Job Access and Reverse Commute grants; Over-The-Road Bus grants; and Planning grants.

Source: FTA TEAM database.

Limitations: Several factors that contribute to grant delays are beyond FTA’s ability to control. These factors include the processing of flexible funds from FHWA through the Treasury, and the Congressional grant release process.

Statistical Issues: Processing time is calculated from submission date to obligation date. \$0 dollar non-funding grant amendments are excluded from analysis.

Verification & Validation: TEAM output file is crosschecked against other system generated files for consistency; inconsistencies are investigated and corrected prior to reporting. Grants with missing or out-of-sequence dates are excluded for calculating averages.

Comment: An FTA task force meeting was held in February 2002 to identify causes for grant processing delays. The resulting action plan is now being circulated for final review and approval. Implementation of the plan will follow.

## Aviation Delay

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<b>Measure:</b>	<b>Percentage of on-time flights. (FY)</b>
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Scope: The time of arrival of completed, scheduled passenger flights to and from the 32 DOT large-hub airports is compared to their scheduled time of arrival. The sum of flights arriving on or before 15 minutes of scheduled arrival time is divided by the total number of completed flights.

Source: The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans. By agreement with the FAA, ASPM flight data is filed by certain major air carriers for all flights to and from 21 large and medium hubs, and is supplemented by flight records contained in the Enhanced Traffic Management System (ETMS) and flight movement times provided by Aeronautical Radio, Inc. (AIRINC). Data are sufficient to complete ASPM data files for 49 airports.

Statistical Issues: There is little major error in the count of completed flights or the count of flights that arrive on-time.

Limitations: Some ASPM data is constructed from ETMS records, a small portion of which may not be maintained in FAA traffic control computers when they are under heavy use.

Verification & Validation: Flight data is extracted from the *Official Airline Guide* (OAG) and compared to data from carrier records, which contains carrier computer reservation flight schedule data. Summary data is compared to data filed monthly with DOT under 14 CFR Part 234, *Airline Service Quality Performance Reports*, which separately requires reporting by major air carriers on flights to and from the 32 large hubs.

Comment: FAA's percentage of flights arriving on-time derived from ASPM data differs only by fractions of a percent from the on-time percentage derived from DOT's slightly different database.

<b>Measure:</b>	<b>Aviation delays per 100,000 activities. (FY) (2001)</b>
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Scope: An FAA reported delay occurs when an aircraft is delayed fifteen minutes or more because of constraints that prevent the aircraft from making a scheduled landing. Delays are counted in five categories: FAA equipment, volume, weather, runway related, and other. Delays due to airline equipment are not considered. "Activities" are total facility activities, as defined in Aviation System Indicators 1998 Annual Report. Total facility activities are the sum of en route and terminal facility activities.

Source: FAA air traffic facilities report the data to headquarters, which incorporates the data into the Air Traffic Operations Management System.

Statistical Issues: There is no major error in either the delay counts (numerator) or the flight operations data (denominator) for this rate. However, random variation in aviation delays results in a significant variation in the delay rate from year to year. The regression standard error in the delay rate, based on 1994-2000 data, is approximately 20.0.

- Limitations: By collecting information on delays of fifteen minutes or more, FAA does not capture the aggregate amount of system delay, but only the most significant delays.
- Verification & Validation: Data is analyzed and checked by an Air Traffic Service headquarters office on a daily basis to ensure accuracy of the information reported.
- Comment: Total delays in all five categories are what the traveling public experience.

**Airport and en route efficiency improvements**

**Measure: Cumulative increase in throughput during peak periods at certain major airports. (FY) (2001)**

- Scope: This measure focuses on the arrival rates during peak traffic periods comparing pre-CTAS rates to post CTAS rates.
- Source: Radar system (HOST and ARTS) data is collected and aircraft flight tracks are obtained from those systems and analyzed to determine arrival and departure times.
- Limitations: The radar systems produce very large data files requiring a substantial effort to extract relevant data for analysis. The extracted data sets need to be of sufficient size to produce statistically significant results.
- Statistical Issues: Conditions (weather, runways in use, aircraft mix) vary, affecting rates. Data must be normalized and data sets must be of sufficient size to produce valid results.
- Verification & Validation: Methodologies and detailed results are available for review in semi-annual FFP1 Metrics Updates (December and June). Results are coordinated with FAA and User stakeholders.
- Comment: None.

**Measure: Cumulative increase in direct routings for en route flight phase. (FY) (2001)**

- Scope: This measure focuses on the number of direct routings provided by en route controllers comparing pre and post-URET installation.
- Source: URET provides data on routing amendments, which is then analyzed to determine the number of direct amendments.
- Limitations: The radar systems produce very large data files requiring a substantial effort to extract relevant data for analysis. The extracted data sets need to be of sufficient size to produce statistically significant results.
- Statistical Issues: Extreme weather conditions, particularly thunderstorms, will significantly affect routing amendments; therefore, data is sampled for days when weather is not a factor.
- Verification & Validation: Methodologies and detailed results are available for review in semi-annual FFP1 Metrics Updates (December and June). Results are coordinated with FAA and User stakeholders.
- Comment: None.

**Runway pavement condition**

<b>Measure:</b>	<b>Percent of runways in good or fair condition (commercial service, reliever, and selected general aviation airports). (CY) (2001)</b>
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**Scope:** Paved runways at the 3,300+ airports in FAA’s National Plan of Integrated Airport Systems (NPIAS) are assessed for pavement condition. The NPIAS airports include all commercial service and reliever airports and those general aviation airports that are significant to national air transportation.

**Source:** The FAA’s Airport Safety Data Program (ASDP) provides extensive data about the facilities that are available at public-use airports. Data are provided approximately annually by FAA inspectors for airports certified under FAR 139. Data for other airports, including most public use general aviation airports, are provided under an FAA contract.

**Limitations:** FAA contracts for a visual survey of the runways to categorize their condition based on criteria developed by the FAA Office of Airports. “Good” condition means all cracks and joints are sealed; “fair” condition means there is mild surface cracking, unsealed joints, and slab edge spalling; and “poor” condition means there are large open cracks, surface and edge spalling, and vegetation growing through cracks and joints. Since the reports are based on a visual inspection, underlying drainage or strength problems are not reported. However, these problems normally create surface defects that are visible. The more detailed pavement condition index (PCI) inspections require a section-by-section examination of the runway rather than an overall assessment used for this performance measure. FAA has been aggregating the ADSP data from all NPIAS airports only every several years for inclusion in the NPIAS report to Congress. This information exists for 1993, 1997, and 1998.

**Statistical Issues:** Less than half of the ADSP records were updated during CY 2000. The relatively subjective nature of judging pavement quality means this measure is also subject to random variation due to measurement error.

**Verification & Validation:** Efforts continue to correlate PCI and ADSP data.

**Comment:** A contract was initiated in FY 2001 to coordinate efforts by state agencies to conduct safety inspections at selected general aviation airports.

## All Weather Access to Airports

<b>Measure:</b>	<b>Number of runways that are accessible in low visibility conditions. (FY) (2001)</b>
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**Scope:** This performance measure counts the total number of airport runways with published ground-based and/or satellite-based landing systems. The intent of this measure is to reflect increased accessibility using satellite-based technology for vertically guided approaches.

**Source:** Internal FAA Aviation Systems Standards tracking system.

**Limitations:** Increasing the number of runways with satellite- based landing systems as well as augmenting existing satellite-based landing systems with vertical altitude guidance will improve access to airports and increase schedule reliability. Both improved access and increased reliability are considered benefits to the aviation industry and the individual air traveler. However, individual use of landing systems is not tracked by current FAA information systems. In addition, aircraft must be appropriately equipped to use the new technology. The FAA does not track these equipment additions.

**Statistical Issues:** There is no major error in the counts of published landing systems. However, like the above measure, random changes in the number of published approaches result in random variation in the count from year to year.

**Verification & Validation:** The number of airport runways with a satellite-based landing system is computed monthly by Aviation Systems Standards.

Comment: None.

## Maritime navigation

Page 72

<b>Measure:</b>	<b>Total number of commercial vessel collisions, allisions, and groundings. (FY)</b>
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**Scope:** The measure includes all commercial ships regardless of tonnage. Intentional groundings are excluded. "Allisions" refers to incidents wherein ships collide with a fixed object such as a bridge or aid to navigation.

**Source:** Coast Guard Marine Safety Information System (MSIS). Sources of reports are most often vessel masters, operators, owners, insurance companies, legal representatives, and other mariners. Collisions, Allisions, and Groundings are reported to the Coast Guard as required by federal regulations.

**Limitations:** The investigation, retrieval, analysis and reporting processes result in under-reporting for the most recent year, with the most significant effects over the most recent 5 months. Estimates are often used to compensate for this known data-lag. It is probable that some collisions, allisions and groundings are not reported to the Coast Guard. This number is unknown. Serious events such as major collisions and hard groundings are more likely to be reported than minor events such as a temporary grounding where a vessel could remove itself without assistance. Duplicate event entries are sometimes entered into MSIS, and some events are mistakenly omitted or coded incorrectly. Verification procedures strive to correct these errors, but it is probable that a small number are not corrected. Because this count of incidents is not normalized to exposure, it does not provide a sensitive indicator of changes in risk.

**Statistical Issues:** The major sources of uncertainty in these measures are the estimation error (as a result of the data-lag) the response error (as a result of parties failing to report casualties to the Coast Guard), and recording error (based on differences in the training and judgment of Coast Guard investigators in recording the accident). The regression standard error for year-to-year chance variation in the number of collisions, allisions and groundings under the new measure is approximately 70, based on data from 1996 through 2000.

**Verification & Validation:** Verification and validation occur at several levels. Edit checks within MSIS software can detect some incorrect or missing data and force review and correction before data entry is completed. Selection lists for certain data fields also reduce the opportunity for data entry error. All investigations go through one level of review at the field unit for accuracy. Investigations of serious marine casualties are also usually reviewed at district and headquarters offices. The headquarters Data Administration staff conducts periodic quality control checks to identify entry errors such as missing data or miscoding, and corrects any errors identified. Each investigation involving a vessel accident is reviewed before it is included in the measure. Errors identified are referred to either the Data Administration staff or the Investigations and Analysis staff for correction.

Comment: During FY 2002, the Marine Safety Information System (MSIS) will be replaced by the Marine Information System for Safety and Law Enforcement (MISLE). While the new system will be a substantial improvement, it is expected to cause serious difficulties in making performance comparisons. One factor is that many business processes were re-designed in conjunction with system development. Another factor is that data quality under MISLE is expected to be superior to that of MSIS. While this represents improvement, it may cause near-term problems in making meaningful comparisons of data between the two systems.

### St. Lawrence Seaway system availability

Page 72

**Measure: Percentage of days in the shipping season that the U.S. sectors of the St. Lawrence Seaway locks are available, including the two U.S. Seaway locks in Massena, N.Y. (CY)**

Scope: The availability and reliability of the U.S. sectors of the St. Lawrence Seaway, including the two U.S. Seaway locks in Massena, N.Y., are critical to continuous commercial shipping during the navigation season (late March to late December). System downtime due to any condition (weather, vessel incidents, malfunctioning equipment) causes delays to shipping, affecting international trade to and from the Great Lakes region of North America. Downtime is measured in minutes/hours of delay for weather (visibility, fog, snow, ice); vessel incidents (human error, electrical and/or mechanical failure); water level and rate of flow regulation; and lock equipment malfunction.

Source: SLSDC gathers the data from internal Lock Operations records.

Limitations: As the agency responsible for the operation and maintenance of the U.S. portion of the St. Lawrence Seaway, SLSDC's lock operations unit gathers primary data for all vessel transits through the U.S. Seaway sectors and locks, including any downtime in operations. Data is collected on site, at the U.S. locks, as vessels are transiting or as operations are suspended. This information measuring the System's reliability is compiled and delivered to SLSDC senior staff each month. In addition, SLSDC compiles annual System availability data for comparison purposes. Since SLSDC gathers data directly from observation, there are no limitations.

Statistical Issues: None.

Verification & Validation: SLSDC verifies and validates the accuracy of the data through review of 24-hour vessel traffic control computer records, radio communication between the two Seaway entities and vessel operators; and video and audiotapes of vessel incidents.

Comment: SLSDC influences the measure primarily through capital planning, and consistent facilities maintenance and investment.

### Domestic Icebreaking

Page 73

**Measure: Days critical waterways are closed due to ice. (FY) (2001)**

**Scope:** Seven waterways are designated critical to icebreaking on the Great Lakes based on historical ice conditions, volume of traffic, and potential for flooding due to ice dams on rivers. The Coast Guard measure is the number of days critical waterways are closed for more than 24 hours due to ice.

**Source:** Data comes from U.S. Coast Guard and U.S. Army Corps of Engineers observations. Waterways closure data is reported to the Ninth Coast Guard District by operating units via operational situation reports.

**Limitations:** The data set associated with this measure is relatively small and simple; hence it tends to be fairly accurate. However, it is possible that small errors exist. This measure captures only Great Lakes winter navigation, and not all domestic icebreaking. The observation of closures in critical waterways is a surrogate for mobility over the whole Great Lakes waterway system.

**Statistical Issues:** This particular performance measure is highly sensitive to the severity of winter weather, which will dramatically affect the ability to predict the number of days the waterways are closed due to ice. The Coast Guard expects a lower rate of waterways closures due to ice during mild winters and a corresponding higher rate of waterways closures during severe winters. The Coast Guard uses a standard severity index (based on average temperatures) to measure the severity of winter weather (-6.2 or milder defines average severity; less than -6.2 defines severe, e.g. -6.5). The term "waterway closure" is also subject to differences in definition by districts or sub-units reporting the data.

**Verification & Validation:** Coast Guard district program managers review and validate data from situation reports and provide Coast Guard headquarters with an End of Season report.

**Comment:** Great Lakes data reflect initial measurement methodology. Further refinements are being explored that will make this measure a more comprehensive gauge of winter navigation.

**Transportation accessibility**

<b>Measure:</b>	<ol style="list-style-type: none"> <li><b>1. Percentage of bus fleets that are Americans with Disabilities Act (ADA) compliant. (CY)</b></li> <li><b>2. Percentage of key rail stations that are ADA compliant. (CY)</b></li> </ol>
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**Scope:** Accessibility for bus fleet means that vehicles are lift or wheel chair ramp equipped. Accessibility for key rail facilities is determined by standards for ADA compliance.

**Source:** Data on bus accessibility is collected in the National Transit Database (NTD), with information gathered from transit operators. Data on rail accessibility is reported to FTA by the transit authorities.

**Limitations:** Measure does not capture ADA compliance (or transportation accessibility) for modes other than transit.

**Statistical Issues:** None.

**Verification & Validation:** For bus accessibility, an independent auditor and the transit agency's CEO certify that data reported to the NTD are accurate. Data are also compared with fleet data reported in previous years, and crosschecked with other related operating/financial data in the report. Fleet inventory is reviewed as a part of FTA's Triennial Review, and a visual inspection is made at that time. FTA's Office of Civil Rights conducts oversight reviews in order to verify the information on key rail station accessibility which has been self-reported by the transit authorities.

**Comment:** FTA will primarily influence the goal through Federal transit infrastructure investment, which speeds the rate at which transit operators can transition to ADA-compliant facilities and equipment.

## Access to jobs

Page 75

**Measure: Number of employment sites that are made accessible by Job Access and Reverse Commute transportation services. (FY) (2001)**

**Scope:** This measure assesses one part of the Job Access and Reverse Commute program – the number of employment sites made accessible that were not previously accessible. An employment site is considered accessible if located within 1/4 mile of services provided by the grantee. Employment sites must offer jobs that require a high school diploma or less. Services that make an employment site accessible may include, but are not limited to, carpools, vanpools, and demand-responsive services as well as traditional bus and rail public transit. The measure cannot account for those Job Access and Reverse Commute activities that encourage riders to use already existing sources of public transit.

**Source:** Data are provided to FTA by grantees of the Job Access and Reverse Commute program in their quarterly progress reports.

**Limitations:** The goal and measurement is the primary evaluation measure aimed at capturing results of the Job Access and Reverse Commute program. Three elements are key to job access – the residence of the employee, the commute, and the job location. This measure includes the “goal” of the commute and the job, but it does not include the “starting line” of the commute, the rider’s home. Although jobs may be made more accessible to transportation services, these services may not provide access to potential workers’ communities. This measure also cannot account for improved accessibility due to lower fares or shorter commute times – it only addresses the gap in service delivery. FTA requires a greater level of precision from larger, urban grantees than rural grantees that may have fewer resources at their disposal.

**Statistical Issues:** There are major problems in obtaining accurate estimates of the number of entry-level jobs within a quarter-mile of grantee services. Surveys are costly and prone to systematic biases. The uncertainty in this estimate is both large and difficult to quantify.

**Verification & Validation:** FTA will use an oversight contractor to verify reported information on a sample basis.

**Comment:** None.

## International air service

Page 78

**Measure: Number of passengers (in millions) in international markets with open skies aviation agreements. (FY)**

Scope:	These data are collected by DOT for all flight segments to/from a U.S. point. The data for this measure include all passengers on U.S. and foreign carrier flights to and from 47 "open-skies" countries and Canada. This indicator reflects (barring significant, unrelated macroeconomic and political influences) the extent to which the competitive environment promoted by DOT increases travel opportunities.
Source:	U.S. air carriers file domestic and foreign data in the T-100 system. Foreign carrier data are from the T-100F database. Foreign air carriers file data for all nonstop flight segments involving a U.S. point.
Limitations:	These data are considered a reliable measure of airline passenger traffic between the U.S. and foreign nations. The annual increase in air traffic, however, is affected by economic strength as well as market liberalization in bilateral aviation trade agreements. Furthermore, only part of the growth rate in open skies markets can be attributed to new traffic – some of the increase may reflect diversion of traffic from less competitive routes with higher taxes and/or inferior service options. The goal of 3% annual growth reflects aviation analysts' judgment of the net impact of these agreements above the estimated growth expected in the industry. For these reasons, this goal must be considered more of a forecast than a "target."
Statistical Issues:	Like other counts of aviation-related activities, there are no major sources of systematic error in these data that have been quantified. However, random variation in the number and distribution of airline passengers, as well as the changes in the number of "open-skies" agreements, results in variation in the measure over time. The regression standard error in this variation for 1994 through 2000 is 2.20.
Verification & Validation:	Airlines are required to certify that these data are accurate. Also, these data are a 100% enumeration of traffic and capacity and can be verified for reasonableness against other databases, such as flight schedules.
Comment:	U.S. policy has favored the linking of networks. Networks allow improved service and marketing in many thousands of small city-pair markets. All of this traffic flows over flights captured by the T-100 and T-100F reports for international flights.

## Essential air service

Page 80

<b>Measures:</b>	<b>1. Percent of subsidized communities with at least 2 round trips/day, 6 days/week (12 round trips/week). (This measure will be discontinued after FY 2001.) (FY) (2001)</b> <b>2. Percent of subsidized communities with at least 3 round trips/day, 6 days/week (18 round trips/week). (FY) (2001)</b>
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Scope:	The measure shows the number of weekly round trips at subsidized EAS communities in the continental U.S. EAS communities are those that were on the certificated airline map in 1978.
Source:	Air carrier filings, airport managers and community officials.
Limitations:	Service frequency is closely associated with program funding levels and the number of EAS communities that require subsidy; the number of communities may change. Service frequency may also be affected by conditions such as an air carrier going out of business, airline strikes, or carrier shutdowns. DOT's goal assumes a fairly constant level of communities in the base (76 in 1998). This measure will not show instances in which the Department is successfully able to effect a carrier transition to commercially viable service without a subsidy. Data has only been gathered for 1996 and later years.
Statistical Issues:	There is no major error present in the subject data.
Verification & Validation:	Continued contact with airport and civic parties, carrier officials, and Congressional staffs.

Comment: Consideration of alternate strategies or performance measures may be prompted by developments such as budget constraints and the makeup of commuter's aircraft fleet.

## Commercial shipbuilding

Page 81

**Measure: Gross tonnage (in thousands) of commercial vessels on order or under construction in U.S. shipyards. (CY) (2001)**

Scope: Includes all commercial self-propelled vessels 100 GT or larger that are on order or under construction (i.e., the orderbook) in the United States, as of December 31. Vessels such as drill rigs and inland barges are not included in these figures.

Source: In addition to MARAD's compilation of data, information is drawn from commercial suppliers of worldwide vessel characteristics data. These include Lloyd's Register of Shipping (marketed through Lloyd's Maritime Information Services), Clarkson's Research Service, and Fairplay.

Limitations: No single commercial supplier of vessel data has complete information on shipyard orders and construction activity in the U.S. None of the major data suppliers collect information on non-self-propelled vessels. In 1998, MARAD began direct semi-annual shipyard surveys. However, as the overall response rate was about 40 percent and did not produce any significant increase in either the quantity or quality of the data, MARAD is seeking alternative methods to obtain this data. The commercial sources used are the best available, and consequently the data reported represents an amalgam of their collection efforts.

Statistical Issues: One anomaly with the data is a gap in the statistics for vessels between 100 and 1,000 GT. Only Lloyd's data provides data in this category, but their data does not cover the full spectrum of vessels. Orderbook data on December 31 of each year represents information available at that time and may not reflect complete information.

Verification & Validation: MARAD compares information obtained from the different data sources to verify its accuracy.

Comment: It has become evident that the available data does not adequately measure the value or complexity of the commercial shipbuilding program; therefore, MARAD plans to develop a new goal and measure.

## Transportation and education

Page 82

**Measure: Number of students graduating with transportation-related advanced degrees from universities receiving DOT funding. (SY) (2001)**

Scope: University Transportation Center (UTC) data includes recipients of Masters and Ph.D. degrees in programs considered to be transportation related.

Source: UTC data to be derived from university records provided to RSPA as part of the UTCs' grant application.

Limitations: While baseline data has been obtained for the UTC program, no data currently exists for other education programs that can result in graduate degrees.

Statistical Issues: There is a possibility of undercounting, due to difficulty in specifying degree programs that are transportation-related. Additionally, some universities may not fully comply.

Verification & Validation: Comparison with data reported for all degree programs by host universities and specific reports on each recipient of an advanced degree.

Comment: None.

**Measure: Cumulative number of students (in thousands) reached through the Garrett A. Morgan Technology and Transportation Futures Program. (SY) (2001)**

Scope: Includes students of all ages reached through specific activities such as internships, job shadowing, career days, video conferences, classroom visits, and teacher externship visits that inform them of the opportunities available in the transportation field and ensure that they have the skills and knowledge required for transportation jobs.

Source: RSPA maintained database to aggregate responses from program organizers.

Limitations: The inherent nature of this measure does not allow us to gauge the quality of contacts made with students “reached” or provide a means to track outcomes in terms of students entering the transportation field as a direct result of the activities sponsored through the Garrett A. Morgan Technology and Transportation Futures Program.

Statistical Issues: Some variability is inevitable in classroom attendance counts, videoconferences, and other measures of exposure. But this uncertainty should be small.

Verification & Validation: RSPA works to ensure that the quantitative data being reported is complete and accurately reflects the associated student activity before it is entered into RSPA’s database.

Comment: None.

**Amtrak ridership**

**Measure: Millions of passengers on Amtrak’s intercity routes. (FY) (2001)**

Scope: The measure includes all revenue paying passengers on intercity routes.

Source: Amtrak Annual Report and Amtrak’s Monthly Train Earnings Report.

Limitations: Data collection relies on accuracy of Amtrak report. Ridership is an outcome indicator that reflects a variety of factors, not insignificantly the capital investment of the Federal Government. Operational decisions of Amtrak and the availability and cost of alternative modes of transportation also influence ridership.

Statistical Issues: Chance variation from year to year, as estimated by the regression standard error from 1994-2000, is 0.81. This calculation assumes stable operations over the seven-year period; since new runs and lines are added and removed fairly often, the standard error is only a rough approximation.

Verification & Validation: Amtrak conducts monthly verification and validation of data.

Comment: A 3.6 million increase in ridership was projected from 1998-2001 as a result of the initiation of the Northeast Corridor high-speed rail service.

**Impediments to port commerce**

**Measure: Percentage of ports reporting landside and waterside impediments to the flow of commerce. (FY) (2001)**

Scope: 81 U.S. deep and shallow draft ports.

Source: Informal telephone surveys of some port officials.

Limitations: The informal surveys did not encompass all of the intended ports within the scope of this measure. These surveys were not scientifically rigorous and the questions asked varied from one region of the country to another.

Statistical Issues: (See Verification and Validation section.)

Verification & Validation: Impediments data was incomplete and inconsistent. After reexamining the available data and the methods for obtaining it, MARAD has concluded that these data do not provide any valid indication as to whether the goal was met or not. MARAD was not successful in clearing up inconsistencies or filling in data gaps.

Comment: MARAD has also reached the conclusion that MARAD programs do not have a measurable impact in reducing impediments at U.S. ports. MARAD efforts in this area are limited in scope to facilitating dialogue between stakeholders in the Marine Transportation System or technology demonstrations at one or two ports. Therefore, this measure will no longer be used.

## Transit system condition

Page 84

<b>Measure:</b>	<b>1. Average condition of motor bus fleet (on a scale of 1 (poor) to 5 (excellent)). (CY 2001)</b> <b>2. Average condition of rail vehicle fleet (on a scale of 1 (poor) to 5 (excellent)). (CY 2001)</b>
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Scope: The measure includes bus, demand response, and rail fleets.

Source: National Transit Database (NTD), with information gathered from transit operators; Transit Economic Requirements Model (TERM), which estimates average vehicle condition using NTD data.

Limitations: Average vehicle condition may not fully reflect the average condition that transit passengers face, since vehicles in worse condition tend to be utilized less. There are also lags in reporting of data to the NTD (thereby requiring preliminary estimates for recent years) and in the effects of federal government capital assistance (since it may take five years from the time that funds are appropriated to the time that new or rehabilitated vehicles are placed in service)

Statistical Issues: Condition is generated from NTD data using an econometric model, which in turn is based on a random national sample of vehicles. Average condition changes very slowly due to the steady replacement of vehicles and the relationships in the estimated model.

Verification & Validation: An independent auditor and transit agency's CEO certify that data reported to the NTD are accurate. Data are also compared with fleet data reported in previous years, and crosschecked with other related operating/financial data in the report. The econometric model used to translate NTD data into average condition ratings is based on visual inspections of a national sample of bus and rail vehicles. The sample will need to be repeated periodically in the future in order to keep the econometric model current with developments in vehicle conditions.

Comment: None.

## Details on DOT Measures of Human & Natural Environment

**Fishery protection**

**Measure: Number of significant domestic and foreign fishery violations found. (FY)**

Scope: Fishery protection is measured by the number of significant fishery violations recorded by the United States Coast Guard. Significant violations are defined as those Living Marine Resource violations which result in one or more of the following conditions: 1) Significant damage/impact to the resource/fisheries management plan; or 2) Significant monetary advantage to the violator over their competitors.

Source: Significant fishery violations are detected by Coast Guard law enforcement units in the course of living marine resource law enforcement boardings. The information from the boarding is reported through the Coast Guard Marine Information for Safety and Law Enforcement (MISLE) System.

Limitations: It is possible that non-entry, duplication, and coding errors are present in MISLE data; however, the likelihood of this error is small.

Statistical Issues: None.

Verification & Validation: Verification and validation of data occurs in several places in the data reporting and collection process. Data entry software helps ensure data quality and consistency by employing selection lists and logic checks. Internal analysis and review of published data by external parties help identify errors.

Comment: None.

**Measure: Percent change in number of species that are designated as overfished (includes only the areas where Coast Guard has enforcement responsibility in fisheries management plans). (FY) (2001)**

Scope: This measure includes species covered under formal fisheries management plans that contain Coast Guard enforcement responsibilities, and that are formally assessed by the National Marine Fisheries Service and designated as either over-fished, approaching over-fished, or not over-fished.

Source: National Marine Fisheries Service. Data is provided through the annual NMFS report to Congress "Status of Fisheries of the United States." This report is mandated by the Sustainable Fisheries Act of 1996.

Limitations: Historical data are limited – 1997 - 2000 only. Not all species required to be assessed were formally assessed as over-fished or not over-fished until 2000. Hence, the number of reported over-fished species rose in NMFS' 2001 assessment. Assessments of over-fishing are based on biological sampling methods and estimations that are subject to error.

Statistical Issues: As noted in the Limitations section, this measure is likely to rise as NMFS continues its search for currently unknown fish stocks. In addition, NMFS revisions to data definitions of over-fished stocks, including their reclassification of over-fished into categories of over-fished and over-fishing has affected the calculation of this measure.

Verification & Validation: Data are provided by NMFS. DOT does not independently verify or validate the data.

Comment: This measure is aligned with the Sustainable Fisheries Act and the National Marine Fisheries Service (NMFS) related goal.

The Coast Guard also measures the rate of compliance with federal regulations as a critical component of enforcing fisheries management plans designed to improve species health, and prevent over-fishing.

## Wetland protection and recovery

Page 91

**Measure: On a program-wide basis, acres of wetlands replaced for every acre affected by Federal-aid Highway projects (where impacts are unavoidable). (FY)**

**Scope:** Measure includes wetlands associated with all Federal-aid highway projects each fiscal year. To be included, wetland replacement (or investment in a wetland bank) must have begun.

**Source:** State DOTs input Federal-aid related wetland degradation and replacement data into either locally developed wetland mitigation databases or the FHWA Wetlands Management Database. FHWA compiles the final data.

**Limitations:** Data only exists on Federal-aid related wetland replacement. Also, uniformity of the data is not guaranteed, as it is subject to interpretation by the reporting State DOTs. In particular, there is no uniform understanding of what should be reported as mitigation acreage. The FHWA has provided guidance on mitigation activities to report and will soon issue the Wetlands Management Database that should reduce the current variations in data received from the States. Data on wetland replacement is available for the past five fiscal years (FY 1996 - FY 2000).

**Statistical Issues:** The non-uniformity of the data is problematic. Definitional ambiguity also makes formal statements of statistical uncertainty problematic.

**Verification & Validation:** Data are gathered from established mitigation amounts required by section 404 (Clean Water Act) permits that states must acquire for their projects. In addition, FHWA provides guidance to help states consistently report mitigation data. This process will be further improved through a standard mitigation database under development for the states. At present, there is no external audit of state data.

**Comment:** All Federal agencies (including FHWA and other modes) must comply with National Environmental Policy Act (NEPA) and the Clean Water Act (specifically section 404(b)(1) of the CWA) regarding disruption of wetlands. These laws require agencies to identify project alternatives that would avoid or minimize impacts to wetlands as a first consideration. These alternatives are subjected to analysis under both NEPA and the Clean Water Act. Under the law, these alternatives must be chosen unless the project sponsors clearly demonstrate that they are not viable because they do not meet the project purpose and need, or will lead to other more significant environmental impacts. If, in compliance with the law, wetland disruption is unavoidable, FHWA then works to achieve this goal of wetland replacement.

## DOT facility cleanup

Page 93

**Measure: Percentage of DOT facilities categorized as No Further Remedial Action Planned (NFRAP) under the Superfund Amendments and Reauthorization Act (SARA). (FY)**

**Scope:** EPA maintains a Federal Facility Hazardous Waste docket (docket), which contains information regarding Federal facilities that manage hazardous wastes or from which hazardous substances have been or may be released. DOT facilities listed on the docket are discussed in the Annual SARA report sent to Congress each year. EPA regional offices make the determination to change facility status to NFRAPs on the docket.

**Source:** Annual SARA Report to Congress.

**Limitations:** The number of DOT facilities listed on the docket can and has fluctuated over the years. Several of the DOT facilities listed have more than one site requiring cleanup and a facility is not removed from the list until all of the sites have no further remedial action planned. Some facilities are listed erroneously and it may take several years to remove them from the docket. NFRAP decisions may be reversed by EPA if future information reveals that additional remedial actions are warranted.

**Statistical Issues:** There is no major error present in the subject data.

**Verification & Validation:** The data used in measuring this performance is based on restoration activities at field locations for USCG, FAA, FHWA, and FRA. These field sites report their activities to their respective headquarters management who verifies the data by periodic follow-up reviews. The data is then reported yearly to the Office of the Secretary, who crosschecks it against data received from EPA and the states.

**Comment:** The primary criterion for NFRAP is a determination that the facility does not pose a significant threat to the public health or environment. NFRAP decisions may be reversed if future information reveals that additional remedial actions are warranted. The Operating Administrations' activities are controlled, to a degree, by interaction and decisions made by EPA Regional personnel.

<b>Management Discussion</b>	<b>The number of obsolete vessels removed from the National Defense Reserve Fleet (NDRF) sites for subsequent disposal. (FY)</b>
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**Scope:** As of January 2002, there were 136 vessels in the NDRF designated for disposal. MARAD estimates this number will increase, as more Ready Reserve Force (RRF) merchant-type vessels become obsolete. This increase is primarily due to obsolescence of additional non-combatant, merchant-type vessels from MARAD's RRF, but also from other Federal agencies (e.g. Coast Guard, NOAA, etc.) for disposal. MARAD notified the Navy in October 2001 that it would not accept titles to obsolete Navy merchant-type ships until significant progress is made in disposing of MARAD's current backlog of obsolete ships. A vessel is not removed from the list of vessels awaiting disposal until it is physically removed from the NDRF sites.

**Source:** MARAD maintains records on each of the vessels located at its three Reserve Fleet sites and the entity responsible for disposal of each of the vessels.

**Limitations:** None

**Statistical Issues:** None

**Verification & Validation:** Vessels removed from the NDRF sites are tracked by MARAD. MARAD has oversight authority for the vessels that it has contracted to be scrapped and continually monitors the operation of the contract holders to make sure that the ships are scrapped in a safe and environmentally sound manner. Additionally, the Environmental Protection Agency and State and local environmental agencies are made aware of ships being scrapped or recycled, and they also monitor progress. MARAD requires written certification from respective entities that all recycled activities are completed in accordance with Federal, State and local laws.

**Comment:** None

## Mobile Source Emissions

<b>Measure:</b>	<b>Monthly average number of area transportation emissions conformity lapses. (FY)</b>
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**Scope:** The transportation conformity process is intended to ensure that transportation plans, programs, and projects will not create new violations of the National Ambient Air Quality Standards (NAAQS), increase the frequency or severity of existing NAAQS violations, or delay the attainment of the NAAQS in designated non-attainment (or maintenance) areas. The publication, Transportation Conformity: A Basic Guide for State and Local Officials contains the basic provisions of the conformity process.

**Source:** FHWA and FTA jointly make conformity determinations within air quality non-attainment and maintenance areas to ensure that Federal actions conform to the purpose of State Implementation Plans (SIPs). With DOT concurrence, the EPA has issued regulations pertaining to the criteria and procedures for transportation conformity, which were revised based on stakeholder comment.

**Limitations:** Conformity determinations are required by law to be updated once every three years. One reason for an area to be in a conformity lapse is due to the fact that it missed the deadlines for making a conformity determination on the transportation plan and program. Under this scenario, the conformity lapse is not a result of the emissions problem in that area.

In addition, certain State Implementation Plan (SIP)-related deficiency findings by EPA (such as a disapproval of a submitted SIP without a protective finding) may also put an area in a conformity lapse. This may take a long time before the SIP-related issue(s) are addressed through the complex and time-consuming SIP revision process. In this situation, FHWA/FTA will have little control over the duration of the conformity lapse.

**Statistical Issues:** None.

**Verification & Validation:** The MPO and U.S. DOT (FHWA/FTA) have a responsibility to ensure that transportation plans and programs within metropolitan boundaries conform to the SIP. In metropolitan areas, the governing board of each MPO must formally make a conformity determination on its transportation plan/TIP prior to submitting them to the U.S. DOT (FHWA/FTA) for review and approval. Conformity determinations for projects outside of these boundaries are the responsibility of the U.S. DOT (FHWA/FTA) and the project sponsor, which usually is the State DOT. In addition, the National Memorandum of Understanding issued on April 19, 2001, provides the EPA and DOT with a framework for coordinating and working through issues in the conformity and SIP processes. Specifically, the MOU's provisions ensure that:

1. EPA and DOT consult on conformity determinations before DOT's approval process;
2. the conformity rule's provisions are appropriately applied with regard to conformity determinations; and
3. adequate interagency consultation persists through the planning and conformity processes to identify and resolve issues prior to a conformity lapse or freeze.

**Comment:** If conformity cannot be determined within certain time frames after amending the SIP, or if three years has passed since the last conformity determination, a conformity lapse is deemed to exist and no new non-exempt projects may advance until a new determination for the plan and TIP can be made. This affects transit as well as highway projects. During a conformity lapse, FHWA and FTA can only make approvals or grants for: projects that are exempt from the conformity process (pursuant to '93.126 and '93.127 of the conformity rule) such as safety projects, and transportation control measures (TCMs) that are included in approved SIP. Only those project phases that have received approval of the project agreement, and transit projects that have received a full funding grant agreement (FFGA), or equivalent approvals, prior to the conformity lapse may proceed during a conformity lapse.

<b>Measure:</b>	<b>Tons (in millions) of mobile source emissions from on-road motor vehicles. (FY) (2001)</b>
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**Scope:** Figure is the sum of on-road mobile source emissions of carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter less than 10 microns in diameter (PM-10).

Source:	National Air Quality and Emissions Trends Report published annually by EPA. (EPA uses data from FHWA's Highway Performance Monitoring System – HPMS.)
Limitations:	On-road mobile source emissions estimates are modeled using vehicle data. Past data contain some variations due to changes in methodology used to obtain on-road mobile source emissions estimates. EPA revises emission estimates periodically based on revised methodology. In 1999, EPA increased the annual emission burden trend based on the knowledge that heavy-duty diesel trucks manufactured since the early 1990's produce higher emissions during high-speed operations. Emissions data are reported in a 2-year time lag. Indicator captures all major mobile source emissions from on-road vehicles. It does not capture off-road mobile sources, such as agriculture and construction machinery, lawn mowers, aircraft, trains, and boats.
Statistical Issues:	The EPA's use of a mathematical model poses issues of model validation. The annual variation in the model's estimates, as measured by the regression standard error for data from years 1994 to 1999, is 2.53. The HPMS data used as input to the model are subject to sampling and non-sampling errors.
Verification & Validation:	EPA conducts verification and validation of data. FHWA field offices perform annual reviews of HPMS data that EPA uses as a part of its model.
Comment:	The National Ambient Air Quality Standards (NAAQS), as revised in July 1997, may create new challenges for DOT in meeting the air quality goal. Targets may need to be modified to reflect these changes.

## Greenhouse Gas Emissions

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<b>Measure:</b>	<b>Metric tons (in millions) of carbon equivalent emissions from transportation sources. (CY) (2001)</b>
Scope:	Measure includes GHGs such as those subject to the Kyoto Protocol (e.g., CO <sub>2</sub> , CH <sub>4</sub> ), but not other GHGs (e.g., water vapor). Emissions from fossil fuels combusted in civilian and military ships and aircraft engaged in international transport of passengers and cargo (i.e., those that are recorded separately as international bunkers) are not included. Does not include emissions from non-transportation mobile sources such as farm and construction equipment.
Source:	<i>Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-1999</i> , published by EPA, supplemented with EPA's Draft <i>Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2000</i> . Estimates are based on data from EPA and other agencies.
Limitations:	GHG emissions are estimated based on DOE estimates of aggregate supply of energy products such as motor gasoline and distillate fuel oil. Further disaggregation (e.g., of transportation modes and other uses such as agriculture) is not always available. Related "upstream" emissions and sequestration (e.g., from petroleum refining) are in separate categories. Procedures for calculating and applying GHG credits and permits have not yet been established.
Statistical Issues:	These data are external to DOT. They are subject to both sampling and non-sampling errors.
Verification & Validation:	EPA conducts verification and validation of data. DOT will participate as appropriate in reviewing data, methodology, and results.
Comment:	None.

## Maritime Oil Spills

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<b>Measure:</b>	<b>Gallons spilled per million gallons shipped by maritime sources. (FY)</b>
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Scope:	Spills from vessels and waterfront facilities that are the target of Coast Guard regulatory prevention efforts are counted; other spills are not. Oil spills of 1 million gallons or more are excluded (or shown separately) from data since they are rare (they do not occur every year) and would have an inordinate influence on statistical trends.
Source:	Spill amounts (numerator) are obtained from the Coast Guard Marine Safety Information System (MSIS). By regulation, spills are reported to the National Response Center or to the Coast Guard Federal On-scene Coordinator. Spill reports are normally made by the representatives of the party spilling the oil. Sometimes spill reports are received from third parties, or spills are discovered by Coast Guard personnel. Data on waterborne oil shipments (denominator) is from US Army Corps of Engineers "Waterborne Commerce Statistics".
Limitations:	The investigation, retrieval, analysis and reporting processes result in under-reporting for the most recent year, with the most significant effects over the most recent 5 months. Estimates are often used to compensate for this known data-lag. It is probable that some spills are not reported. Large spills that impact a large area, or are located in heavily transited areas are more likely to be reported than small spills or spills in remote locations. The actual amount of oil spilled may vary significantly from the amount estimated. The significance of this error depends on the unique circumstances of each case. However, the error rate for volume of oil spilled is estimated to be less than 5% because large spills receive a high level of review and account for most of the volume spilled. Duplicate spill entries are sometimes entered into MSIS, and some spills are mistakenly omitted or entered incorrectly. Verification procedures strive to correct these errors, but it is probable that some are not corrected. By excluding non-regulated sources and major oil spills, the measure does not capture the amount spilled annually from all sources. However, the exclusions are helpful in assessing the impact of existing Coast Guard regulations and policies (program management).
Statistical Issues:	The major sources of uncertainty in this measure are the reporting error (as a result of the data-lag), estimation error (actual amount of oil spilled may vary from the amount estimated), and response error (as a result of spills not being reported to or discovered by the Coast Guard). The regression standard error for year-to-year chance variation is 1.8 for the number of gallons spilled per million gallons shipped, based on data from 1995 through 2000.
Verification & Validation:	Verification and validation occurs at several levels. Edit checks within MSIS can detect some incorrect or missing data and force review and correction before data entry is completed. Selection lists for certain data fields also reduce the opportunity for data entry error. All investigations go through one level of review at the field unit for accuracy. Investigations of spills are also usually reviewed at district and headquarters offices. The headquarters Data Administration staff conducts periodic quality control checks to identify entry errors such as missing data or miscoding, and corrects any errors identified. Each spill involving 1,000 gallons or more is reviewed before it is included in the measure. Errors identified are referred to either the Data Administration staff or the Investigations and Analysis staff for correction.
Comment:	During FY 2002, the Marine Safety Information System (MSIS) will be replaced by the Marine Information System for Safety and Law Enforcement (MISLE). While the new system will be a significant improvement, it is expected to cause serious difficulties in making performance comparisons. One factor is that many business processes were re-designed in conjunction with system development. Another factor is that data quality under MISLE is expected to be superior to that of MSIS. While this represents improvement, it may cause near-term problems in making meaningful comparisons of data between the two systems.

## Hazardous materials spills

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<b>Measure:</b>	<b>Tons of hazardous liquid materials spilled per million ton-miles shipped by pipelines. (CY)</b>
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Scope:	Hazardous liquid pipeline incidents are those that result in a fatality or injury resulting in hospital treatment or hospitalization, property damage equal to or greater than \$50,000, or more than 50 barrels spilled. (A rulemaking proposes to lower the reporting threshold for spill amount from 50 barrels to five gallons.) This measure tracks only releases from hazardous liquid pipelines to the environment. Natural gas pipeline releases vaporize into the atmosphere and do not have long-term significant impact on the environment, and thus are not included in this measure.
Source:	Pipeline operators report to RSPA on form 7000-1, Hazardous Liquid Accident Report. RSPA records the data in RSPA's Hazardous Materials Information System.
Limitations:	Because of the magnitude and frequency of fluctuations in the historical data for this measure, a short-term goal will be of limited use in tracking program performance. RSPA does not collect volume shipped data but uses the Association of Oil Pipelines annual Fact Sheet as source for this part of the measure.
Statistical Issues:	These spill incidents are rare and probably not independent events. The performance measure is a ratio, so uncertainty in the denominator can have a large effect on the overall uncertainty.
Verification & Validation:	RSPA reviews the data for accuracy. Supplemental reports are requested where obvious reporting shortcomings are indicated. Additionally, the ASME B31.4 liquid pipeline data review subcommittee performs an annual examination of the hazardous liquid incident reports. Known problems with under-reporting property damages and spill quantities are being addressed by a rulemaking to revise accident reporting requirements to implement a new "open and closed" status to insure that operators continue to file supplemental reports until the spill consequence is fully reported. A new industry data improvement effort piloted in 1999 will provide better precursor data and more extensive data about impacts to the environment of hazardous liquid pipeline spills. The American Petroleum Institute is housing the voluntary data repository, which will collect information on spills down to five gallons (down to one gallon in water) for all pipeline spills, including those currently not jurisdictional to RSPA.
Comment:	The data for this measure fluctuate year to year. RSPA is studying the spill data to determine the nature of this fluctuation and improve this measure.

**Aircraft noise exposure**

<b>Measure:</b>	<b>Number of people in the U.S. (in thousands) who are exposed to significant noise levels (65 decibels or more). (FY)</b>
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Scope:	Residential population exposed to aircraft noise above Day-Night Sound Level of 65 decibels around U.S. airports with the greatest number of commercial jet take-offs and landings.
Source:	A statistical modeling technique (the MAGENTA model) is applied using U.S. population data from the Department of Commerce, locally developed traffic distribution (route and runway utilization), and aircraft distributions developed using the Official Airline Guide and current aircraft registration databases. The local traffic utilization data is available for the busiest U.S. airports in the form of studies developed for the FAA's Integrated Noise Model (INM). For smaller airports, a generic statistical procedure was employed.
Limitations:	No actual count (i.e., using a local survey) is made of the number of people exposed to aircraft noise. No military or general aviation aircraft are included in the FAA's model. Aircraft type and event level can be considered current. However, the majority of the databases used to establish route and runway utilization were developed from 1990 to 1997, with many of them now over seven years old. Changes in airport layout including expansions may not be reflected. The benefits of federally funded mitigation, such as sound insulation or buyout, are not accounted at present. Future development of the methodology will attempt to quantify the gains (reduction in people exposed) due to these actions.

- Statistical Issues: This measure is derived from model estimates that are subject to errors in model specification. The estimates of population data will be revised once the new U.S. Census data for 2000 is released and the model software is updated accordingly.
- Verification & Validation: The Integrated Noise Model has been validated with actual acoustic measurements at both airports and other environments such as areas under aircraft at altitude. External forecasts data are from primary sources. The MAGENTA population exposure methodology has been thoroughly reviewed by an ICAO task group and was validated for several airport specific cases.
- Comment: FY 2000 was the first year measuring using the MAGENTA model.

## Transit service

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**Measure: Percent of urban population living within a quarter mile of a transit stop with service frequency of 15 minutes or less (non-rush-hour). (CY) (2001)**

- Scope: A transit stop is defined as a bus stop, but does not include rail stations unless associated with a bus stop.
- Source: FTA compiled information from bus schedules across the country. Population statistics come from the Census Bureau. Information from both of these sources was formatted using the Geographic Information System.
- Limitations: Transit stops do not include rail stations (such as light rail or subway). However, rail stations are almost always served by bus lines, so most persons who live near a rail station also live near a bus line.
- Statistical Issues: The extrapolation of population statistics from the Census Bureau at a level fine enough to support inferences within a geographic radius of a quarter mile is difficult. The measurement aspects of this estimate require careful examination.
- Verification & Validation: Under development.
- Comment: The Federal Transit Administration is working to develop the Transit Performance Monitoring System. Fully instituted, the TPMS will allow the Department to measure not only how many people live close to public transit, but also how many people use public transit for basic mobility.

## Details on DOT Measures of Organizational Excellence

### Small disadvantaged and women-owned small business contracting Page 111

**Measure: 1. Percent share of the total dollar value of DOT direct contracts that are awarded to women-owned businesses. (FY)**  
**2. Percent share of the total dollar value of DOT direct contracts that are awarded to small disadvantaged businesses. (FY)**

- Scope: Includes contracts awarded by DOT contracting activities (except FAA) through direct procurement (i.e., not including contracts issued by grantees).
- Source: All DOT contracting activities except the FAA report data to the Contract Information System (CIS). This data is reported to the Federal Procurement Data Center (FPDC) by the CIS.

**Limitations:** Contracting data is reported by procurement offices directly into the CIS. Data can still be entered into CIS and reported to FPDC after performance measurement results are submitted so small variations in prior year performance data may result.

**Statistical Issues:** There is no major error present in the subject data. However, random variation in the number of DOT contracts as well as the number of women-owned and small-disadvantaged businesses each year results in some random variation in these measures from year to year. The regression standard error for 1994-2000 is 0.64 percent for women-owned small businesses and 1.23 percent for small-disadvantaged businesses.

**Verification & Validation:** DOT conducts comparison checks of CIS data with FPDC data to reconcile discrepancies. On occasion, GSA audits the accuracy of DOT contracting data.

**Comment:** None.

**Environmental Justice**

<b>Measure:</b>	<b>Number of environmental justice cases that remain unresolved after one year. (FY)</b>
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**Scope:** Data will cover complaints filed with DOT under Title VI of the Civil Rights Act of 1964 and which have had environmental justice elements, such as allegations of substantially adverse environmental or health impact on a minority or low-income community by a transportation project. Case resolutions are actions that end or administratively close out complaints. These include such actions as determinations of no jurisdiction, withdrawals by complainants, resolutions achieved through alternative dispute resolution, findings of no violation, and negotiated settlements after discrimination findings under Title VI.

**Source:** DOT will collect this data through the External Complaint Tracking System (XTRAK).

**Limitations:** This measure is an initial indicator of how well DOT processes EJ complaints. Variables that will not necessarily be assessed include such factors as magnitude of injury, number of beneficiaries adversely affected, pervasiveness, and time constraints before irreparable damage occurs. Other statutory requirements exist for NEPA concerns.

**Statistical Issues:** There is no major error present in the subject data.

**Verification & Validation:** Data will cover the entire universe of external complaints received by DOT, and will be entered into the system by operating administrations and DOT Office of Civil Rights staff.

**Comment:** This indicator does not measure the impact of DOT’s efforts to prevent the conditions that give rise to complaints. It does provide an initial measure of response timeliness, which is important to the public. The measure was expanded in 2000 to include the percent of cases that remain unresolved after one year as a further indicator of the timeliness of resolution. All environmental justice cases by definition relate to the concerns of a community of low income and/or minority people. In addition, the number of cases indicates the pervasiveness of community perception of significantly adverse environmental and health concerns.

### Appendix II – Budget Crosswalk

Appropriation Accounts by Strategic and Organizational Goals		(Some totals may not add exactly, due to rounding.)					
Operating Administration	Appropriation Accounts in the President's FY 2003 Budget Appendix	Totals	Safety	Homeland Security	Mobility & Economic Growth	Environment	Org. Excellence
	Spending Authority (BA & Ob. Lim.)	(\$M)					
<b>OST</b>	<b>Salaries and Expenses</b>	96.0	0.0	9.0	10.1	0.1	76.8
	<b>Office of Civil Rights</b>	9.2	0.0	0.0	0.0	0.0	9.2
	<b>Minority Business Outreach</b>	3.0	0.0	0.0	0.0	0.0	3.0
	<b>Transportation Planning, R&amp;D</b>	10.8	1.7	0.7	6.4	0.0	2.0
	<b>Essential Air Service</b>	30.0	0.0	0.0	30.0	0.0	0.0
	<b>DOT Headquarters Building</b>	25.0	0.0	0.0	0.0	0.0	25.0
	<b>MBRC Direct loan subsidy &amp; admin</b>	0.9	0.0	0.0	0.0	0.0	0.9
	<b>OST SUBTOTALS:</b>	<b>175.0</b>	<b>1.7</b>	<b>9.7</b>	<b>46.5</b>	<b>0.1</b>	<b>116.9</b>
<b>USCG</b>	<b>Operating Expenses</b>	4,635.3	786.8	2,012.3	955.0	881.1	0.0
	<b>Acquisition, Construction &amp; Improvements</b>	735.8	143.5	373.9	78.9	139.7	0.0
	<b>Environmental Compliance &amp; Restoration</b>	17.3	0.0	0.0	0.0	17.3	0.0
	<b>Retired Pay and Contributions to Ret. Pay</b>	1,625.0	280.2	718.6	312.5	313.5	0.3
	<b>Reserve Training</b>	112.8	0.0	112.8	0.0	0.0	0.0
	<b>Research, Development, Test and Eval.</b>	23.1	3.3	7.5	5.2	6.0	1.1
	<b>State Recreational Boating Safety Programs</b>	64.0	64.0	0.0	0.0	0.0	0.0
	<b>Oil Spill recovery, Coast Guard</b>	61.2	0.0	0.0	0.0	61.2	0.0
	<b>Alteration of Bridges</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>USCG SUBTOTALS:</b>	<b>7,274.5</b>	<b>1,277.8</b>	<b>3,225.1</b>	<b>1,351.6</b>	<b>1,418.8</b>	<b>1.4</b>	
<b>TSA</b>	<b>Transportation Security Administration</b>	4,676.0	0.0	4,676.0	0.0	0.0	0.0
	<b>TSA SUBTOTAL:</b>	<b>4,676.0</b>	<b>0.0</b>	<b>4,676.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>FAA</b>	<b>Operations</b>	7,482.0	3,794.6	124.0	3,146.0	46.1	371.3
	<b>Grants-in-aid for Airports</b>	3,403.6	157.3	272.0	2,584.0	374.0	16.3
	<b>Facilities and Equipment</b>	2,999.6	560.4	124.0	2,253.6	61.6	0.0
	<b>Research, Engineering, and Development</b>	126.7	107.9	0.0	11.1	7.7	0.0
	<b>FAA SUBTOTALS:</b>	<b>14,011.9</b>	<b>4,620.2</b>	<b>520.0</b>	<b>7,994.7</b>	<b>489.4</b>	<b>387.6</b>

Appropriation Accounts by Strategic and Organizational Goals		(Some totals may not add exactly, due to rounding.)					
Operating Administration	Appropriation Accounts in the President's FY 2003 Budget Appendix	Totals	Safety	Homeland Security	Mobility & Economic Growth	Environment	Org. Excellence
	Spending Authority (BA & Ob. Lim.)	(\$M)					
<b>FHWA</b>	<b>Federal-Aid Highways</b>	23,772.5	873.9	45.3	21,602.2	1,193.1	58.0
	<b>Administration</b>	317.7	12.3	0.4	274.3	19.7	11.0
	<b>FHWA SUBTOTALS:</b>	<b>24,090.2</b>	<b>886.2</b>	<b>45.7</b>	<b>21,876.5</b>	<b>1,212.8</b>	<b>69.0</b>
<b>FMCSA</b>	<b>Motor Carrier Safety</b>	120.5	120.0	0.0	0.0	0.0	0.5
	<b>Border Enforcement Program</b>	60.9	60.9	0.0	0.0	0.0	0.0
	<b>National Motor Carrier Safety Program</b>	190.0	190.0	0.0	0.0	0.0	0.0
	<b>FMCSA SUBTOTALS:</b>	<b>371.4</b>	<b>370.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.5</b>
<b>NHTSA</b>	<b>Operations and Research</b>	202.9	202.7	0.0	0.0	0.0	0.3
	<b>Highway Traffic Safety Grants</b>	225.0	225.0	0.0	0.0	0.0	0.0
	<b>National Driver Register</b>	2.0	2.0	0.0	0.0	0.0	0.0
	<b>NHTSA SUBTOTALS:</b>	<b>429.9</b>	<b>429.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.3</b>
<b>FRA</b>	<b>Safety and Operations</b>	122.9	121.8	0.0	0.0	0.0	1.1
	<b>Railroad Research and Development</b>	28.3	28.3	0.0	0.0	0.0	0.0
	<b>Penn Station Redevelopment</b>	20.0	0.0	0.0	20.0	0.0	0.0
	<b>Next Generation High Speed Rail</b>	23.2	13.1	0.0	10.1	0.0	0.0
	<b>Amtrak Reform Council</b>	0.0	0.0	0.0	0.0	0.0	0.0
	<b>Capital Grants to Amtrak</b>	521.5	0.0	0.0	521.5	0.0	0.0
	<b>FRA SUBTOTALS:</b>	<b>715.9</b>	<b>163.2</b>	<b>0.0</b>	<b>551.6</b>	<b>0.0</b>	<b>1.1</b>
<b>FTA</b>	<b>Formula Grants</b>	3,839.0	0.0	1.7	3,764.6	50.0	22.7
	<b>Capital Investment Grants</b>	3,036.0	0.0	0.0	2,951.4	54.8	29.8
	<b>Transit Planning &amp; Research</b>	122.0	8.2	5.1	105.0	2.5	1.2
	<b>University Transportation research</b>	6.0	0.0	0.0	6.0	0.0	0.0
	<b>Job Access &amp; Reverse Commute Grants</b>	150.0	0.0	0.0	150.0	0.0	0.0
	<b>Administrative Expenses</b>	76.6	0.0	1.2	70.9	0.0	4.5
	<b>FTA SUBTOTALS:</b>	<b>7,229.6</b>	<b>8.2</b>	<b>8.0</b>	<b>7,047.9</b>	<b>107.3</b>	<b>58.2</b>

Appropriation Accounts by Strategic and Organizational Goals		(Some totals may not add exactly, due to rounding.)					
Operating Administration	Appropriation Accounts in the President's FY 2003 Budget Appendix	Totals	Safety	Homeland Security	Mobility & Economic Growth	Environment	Org. Excellence
	Spending Authority (BA & Ob. Lim.)	(\$M)					
<b>SLSDC</b>	St Lawrence Seaway Development Corp.	14.8	0.0	0.0	14.8	0.0	0.0
	<b>SLSDC SUBTOTALS:</b>	<b>14.8</b>	<b>0.0</b>	<b>0.0</b>	<b>14.8</b>	<b>0.0</b>	<b>0.0</b>
<b>RSPA</b>	Research and Special Programs	45.7	31.9	1.5	1.9	2.9	7.5
	Pipeline Safety	64.5	37.1	0.0	0.0	27.4	0.0
	Emergency Preparedness Grants	14.3	14.3	0.0	0.0	0.0	0.0
	<b>RSPA SUBTOTALS:</b>	<b>124.5</b>	<b>83.3</b>	<b>1.5</b>	<b>1.9</b>	<b>30.3</b>	<b>7.5</b>
<b>OIG</b>	Salaries and Expenses	60	See Note 1.				Excluded
	<b>OIG SUBTOTALS:</b>						
<b>STB</b>	Salaries and Expenses	21	See Note 1.				Excluded
	<b>STB SUBTOTALS:</b>						
<b>MARAD</b>	Maritime Security Program	98.7	0.0	98.7	0.0	0.0	0.0
	Operations and Training	97.2	0.0	74.4	20.0	2.8	0.0
	Ship Disposal	11.2	0.0	0.0	0.0	11.2	0.0
	Maritime Guaranteed Loan (Title XI) <sup>2</sup>	4.5	0.0	0.0	4.5	0.0	0.0
	<b>MARAD SUBTOTALS:</b>	<b>211.6</b>	<b>0.0</b>	<b>173.1</b>	<b>24.5</b>	<b>14.0</b>	<b>0.0</b>
<b>BTS</b>	Administration	35.8	0.0	0.0	0.0	0.1	35.7
	<b>BTS SUBTOTALS:</b>	<b>35.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>35.7</b>
<b>DEPARTMENT OF TRANSPORTATION TOTALS:</b>		<b>59,361.2</b>	<b>7,841.1</b>	<b>8,659.0</b>	<b>38,910.0</b>	<b>3,272.8</b>	<b>678.2</b>
<b>Share of Total DOT Spending Authority:</b>		100%	13.2%	14.6%	65.5%	5.5%	1.1%
<p><b>Notes:</b> Program-related administrative costs and general overhead are distributed proportionately.</p> <p>1. The Inspector General and Surface Transportation Board are not included in totals since they are decisionally independent.</p> <p>2. Funding is for administration of prior balances only.</p>							

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## Appendix III DOT Program Evaluation

Performance measures show if intended outcomes are occurring and assess any trends. Program evaluation uses analytic techniques to assess the extent to which our programs are contributing to those outcomes and trends. As required by GPRA, the Department's 2000 - 2005 Strategic Plan included an initial list of new program evaluations planned for those fiscal years. This appendix provides a summary of DOT's plan for managing program evaluation within the Department, a report on the FY 2001 program evaluations, and an updated list of program evaluations being conducted in FY 2002.

**Types of Program Evaluations:** Program evaluation is an assessment, through objective measurement and systematic analysis, of the manner and extent to which programs achieve intended objectives.

The purpose of this program evaluation plan is to improve the analytic content of evaluations Department-wide in order to manage DOT programs for results. This plan generally focuses on the following types of program evaluation:

- *Impact Evaluations* use empirical data to compare measurable program outcomes with what would have happened in the absence of the program. These represent the highest standard of program evaluation, and are often the most difficult and expensive to construct and interpret.
- *Outcome Evaluations* assess the extent to which programs achieve their outcome oriented objectives. Outcome evaluations will use quantitative methods to assess program effectiveness, but fall short of the rigorous causal analysis of impact evaluations.
- *Process Evaluations* assess the extent to which a program is operating as intended. While a true process evaluation will use objective measurement and analysis, it falls short of assessing the causal links between intervention and outcome.
- *Cost-Benefit and Cost-Effectiveness Analyses* compare a program's outputs or outcomes with the costs to produce them. This type of analysis conforms with program evaluation when applied systematically to existing programs and when measurable outputs and outcomes are monetized.

Program evaluations are retrospective, quantitative assessments of existing programs. Forecasts of the impact of proposed or planned programs are

considered part of policy analysis, and are not considered in this evaluation plan.

The aim of this plan is to identify areas of program evaluation for:

- Programs that represent significant DOT activities contributing to our strategic goals.
- Programs that are cross-modal in nature, or would benefit from evaluation that is reviewed outside an Operating Administration.
- Programs where Department-wide expertise can assist in evaluation planning and review.

**Program Evaluation Management:** DOT manages program evaluations through a Program Evaluation Council (PEC), comprised of representatives from each Operating Administration and select Secretarial Offices. The PEC reviews proposals for program evaluations, shares information across modes, and monitors ongoing evaluations.

DOT staff, contractors, or academic institutions may do program evaluations. Internal Departmental reviews are designed to ensure that the finished evaluations are useful regardless of how they are accomplished.

The Office of Budget and Programs and the Inspector General manage the schedule of program evaluations, fosters training and development of program evaluation skills, and reviews the quality of the program evaluation process. The Office of Budget and Programs works to ensure that the results of program evaluations are considered in the allocation of resources. The Office of the Inspector General continues its own program evaluations independent of this schedule, as deemed appropriate.

## **Summary of FY 2001 Program Evaluations:**

### **Project Kimball (Coast Guard)**

The Coast Guard chartered a project team to conduct an intensive examination of the boat forces (groups, stations, and aids to navigation teams) and how they function as an integrated, interrelated system and to identify issues and problems affecting mission performance. The project team worked concurrently with other reviews of the search-and-rescue program, including one by the Department of Transportation Inspector General. The team was tasked with making recommendations that would improve performance. The evaluation was initiated in response to increased boat forces operational failures, an identified lack of resources, and a perceived loss of focus on boat forces readiness. The team compared performance expectations at each type of unit to the resources and performance each organization actually provided. The team undertook its work making every effort throughout the study to ensure that all recommendations would support successful mission accomplishments and Coast Guard core and strategic values and goals.

The project employed Human Performance Technology (HPT) in a three-phase approach focusing on desired outcomes. HPT is an accepted and systematic approach to both solving problems and identifying opportunities for improvement. The evaluation was divided into three chronological (HPT) phases: Work, Workplace, and Worker. Each phase was designed to "build upon" the previous phase's efforts.

Fourteen (14) principal recommendations were made in the study dealing with personnel management practices, staffing, training of boat forces personnel, engineering systems, command and control capabilities and organizational support structures. The evaluation results will be used in further developing parts of the Coastal Search and Rescue Strategic Plan, budget strategies, and numerous other efforts, including force allocation, response boat development and engineering and personnel support program improvements.

### **Drug Smuggling Deterrence Study (Coast Guard)**

A drug smuggling deterrence study was co-sponsored by the Office of National Drug Control Policy (ONDCP), the U.S. Customs Service, and the U.S. Coast Guard. The study -- entitled *Measuring the Deterrent Effect of Enforcement Operations on Drug Smuggling, 1991-1999* -- was completed in August and released by ONDCP in September.

The study, took a mixed qualitative-quantitative approach.

The quantitative analysis assessed whether interdiction operations or events affected drug trafficking activity. This approach was encumbered by an incomplete picture of drug enforcement resource levels and activities, and by a lack of regional price series for cocaine. Despite these shortcomings, there was evidence that interdiction operations and events significantly impacted the drug supply chain. In particular, the study found that:

- Source zone interdiction operations and the arrest or death of major drug traffickers caused increases to cocaine prices in the U.S.
- Most transit and arrival zone interdiction operations do not have a statistically significant impact on U.S. cocaine prices, but exhibit an impact on trafficker behavior (e.g., smugglers change their transportation mode or route).

The qualitative analysis attempted to replicate the 1989 Rockwell study *Measuring Deterrence – Approach and Methodology*, which interviewed convicted smugglers to assess deterrence.

- Following interviews with smugglers, the study concludes that the biggest deterrents are:
  - Threat of informants, whether cooperating defendants or confidential informants.
  - Prison terms of 25 years or greater.
  - Ability to be prosecuted under "dry conspiracy" charges (i.e., they need not be caught in possession of the drug to be convicted).

- The smugglers did not perceive a threat on the water:
  - They think that law enforcement lacks the necessary assets to spot them.
  - If spotted, they are certain law enforcement can't catch them, and, if caught, the use of sophisticated (hidden) compartments makes it virtually impossible for the drugs to be located.

### **Readiness Management System (Coast Guard)**

In September 1999, the Coast Guard chartered a Readiness System Development Team (RSDT) to assess how the Coast Guard measures and manages its readiness and to develop specific guidelines to establish a standard, service-wide readiness management system. The RSDT determined that the Coast Guard needed an agreed-upon framework to better manage readiness. While some segments of the Coast Guard have systems or processes to measure readiness, large parts of the Coast Guard based their readiness information on anecdotal stories. In some cases, individual units or communities adopted their own measurement systems to meet their own needs. Thus, the Coast Guard was unable to measure readiness accurately on a service-wide basis.

The RSDT determined that every level of personnel -- from station commanders at remote locations to senior Headquarters decision-makers -- need a readiness management system based on common models, measures, standards, and data. As a result of its research and interviews, the RSDT developed four foundational models upon which a new Readiness Management System (RMS) is based:

- **Resources to Results**: Depicts how the Coast Guard turns resources (i.e., people, information, and systems) into results.
- **Three Tiers of Readiness**: Depicts that readiness can and should be assessed at three different levels in the organization (i.e., unit, Area/District/MLC/, and Headquarters).
- **Six Facets or Readiness**: Depicts the six facets or categories (people, training, equipment, support, infrastructure, and information) that are used to measure readiness.
- **Four Parts of the RMS**: Depicts how the RMS will operate. It includes the use of the Readiness *Smart Window*, an intranet web-based computer display that extracts data from existing databases. It helps decision-makers assess the readiness of units that they are responsible for leading or supporting by answering three key questions: (1) am I ready and for how long; (2) if not, why not; (3) what might I do about it.

The RMS concept was initially tested using Coast Guard multi-mission boat stations, which primarily focus on search and rescue and law enforcement, but support all Coast Guard strategic goals. A proof-of-concept was tested at 12 boat stations starting in July 2000. It contained 23 measures of the six facets of readiness. Based on the favorable results of the proof-of-concept, the RMS is now underway for use by the entire Coast Guard.

### **Navigation Aid Mix Study (Coast Guard)**

The Coast Guard maintains short-range (mostly visual) and long-range (radio) aids to navigation that guide mariners to safe waters and away from hazards. Recent developments in radio navigation, as well as technological developments in electronic charting and navigation system integration, provide additional services to mariners. As part of its broader research into aid mix and waterway risk management, the Coast Guard Research and Development Center (RDC) developed a web-based survey to help understand how mariners are actually using navigational aids. This survey sought to (1) identify the navigation information required by mariners and how they use aids to navigation to acquire this information and guide their vessels; and (2) reveal ways to manage the Coast Guard's Aids to Navigation system more effectively, while maintaining an acceptable level of safety, mobility, security, and protection of natural resources.

A pilot test of the survey was conducted of several major maritime population segments: Commercial, Public/Military, and Recreational Vessel operators. The survey questions were designed to gain a better understanding of user preferences for and actual use of navigational aids as a function of operation,

visibility, and user group. The results of the pilot study were used to develop findings concerning navigational aid use, an assessment of program service alignment with user needs, and suggestions for improving the overall survey process.

Findings in the study area indicate that mariners use nearly all navigational aids that are available to them, over the range of conditions and areas in which they navigate. Both navigational aid preferences and usage patterns vary with user group, area of operation, and visibility. Global Positioning System (GPS) technology has been widely accepted by all groups in the study area except the Small Port-based Fishing and Charter group. More than half of the operators in this group continue to rely on LORAN as their primary radio aid to navigation. The use of Differential GPS by Large Commercial and Public/Military vessel operators is significant, but is limited to one third or less of the operators in all other user groups. However, mariners in all user groups cited buoys and lighted buoys, in addition to GPS, as their most preferred navigational aid type. As users progress from the open ocean, through the near coastal area to port, there is a general shift in preference from radio aids to mixed preference (combinations of radio and short range aids) to short range aids as the primary source of information. Overall, the assessment revealed no clear areas of outdated or substantially misaligned services.

### **Strategy for Migrant Interdiction (Coast Guard)**

The purpose of this study is to develop a strategic plan for the Coast Guard migrant interdiction mission. The strategic goals, objectives, and organizational foundations of Alien Migrant Interdiction Operations (AMIO) are being identified in the study. The results of the study will form the basis of the new 10-year AMIO strategic plan, tentatively named SOVEREIGN SHORES. A final report will be completed in FY2002.

### **Assessment of Runway Safety Program (FAA)**

The National Blueprint for Runway Safety, issued in October of 2000, committed the Runway Safety Program Office to conducting an annual review of the Runway Safety Program. The first such review was completed in July 2001. The purpose of the review was to ensure that the staff of the Runway Safety Program Office, as well as all those who support them from the various FAA lines of business and the aviation community/industry, are provided with feedback on the results of actions since the inception of the office. The Assessment Team's findings were based upon their review of existing documentation and the information derived from interview responses and facility visits, including regional offices. Their findings were used to further consider best practices and issues presented in the initial assessment report.

Best Practices are processes, procedures or practices that have been effective and should be more widely adopted, or that others believe should be implemented at other offices/facilities. Most noteworthy among the list are: (1) the increased involvement and participation between Regional Administrators and FAA Headquarters; (2) a multimedia approach to making airport marking information available to users; (3) runway safety initiatives by airport managers, industry and State aviation officials; (4) increased National Air Traffic Controller Association (NATCA) involvement and participation; and (5) shared runway incursion reduction goals (Category A & B) on all supporting organizations' executive Short Term Initiatives.

Issues are areas within the processes, procedures or practices that are in need of improvement. The Assessment Team's findings included analyses, conclusions and recommendations. The team's recommendations included: (1) distribution of the revised Runway Safety Order, to spell out roles and responsibilities for all who have a part in runway incursion reduction efforts; (2) ensuring that efficient lines of communication and feedback channels remain open; (3) establishment of a national database for runway safety to reduce duplicative data collection efforts; (4) development of a process that ensures the right amount of industry participation in runway safety activities; and (5) development of Standard operating procedures that lay out the processes for conducting runway incursion action team (RIAT) meetings, and tracking action items and feedback. The Office of Runway Safety will use these and other findings as it focuses upon improved performance and measurable enhancement of runway safety surface operations.

### **Implementation of FAA Core Compensation Plan (FAA)**

Section 347 of the Department of Transportation Appropriations Act of 1996 granted the FAA the authority to develop innovative and flexible Human Resource Management (HRM) systems to support the accomplishment of the agency's mission and meet customer expectations. The FAA took advantage of this opportunity and designed a new compensation system that is tailored specifically to FAA's competitive environment, its values, and organizational objectives. In June 1998, the agency piloted the Core Compensation Plan in the segment of the work force reporting to the Associate Administrator for Research and Acquisitions (ARA). The Plan was later broadened to other non-bargaining FAA organizations in April 2000.

An internal corporate evaluation was conducted to examine the implementation of the Core Compensation Plan's components in ARA and the expansion of the Plan in other FAA organizations. Specifically, the evaluation focused on (1) compensation baseline measures, (2) manager and employee perceptions and (3) the implementation of the Plan's components in ARA -- e.g. Organizational Success Increases (OSI), Superior Contribution Increases (SCI), Job Documentation, and Pay Setting Decision Tools. Data for the evaluation came from multiple methods and sources including document reviews, FAA's Consolidated Personnel Management Information System (CPMIS), structured and informal interviews, employee/manager surveys, review of pay setting decision-support tools, and review of training evaluation results. Information gathered through these methods were analyzed and the following key findings were identified based on convergent information from the evaluation:

- The ARA pilot provided valuable lessons learned for broader implementation of the Core Plan in the agency. For example, the pilot highlighted the importance of having in place, an organizational performance plan with measurable outcomes and an effective performance management system creating a clear line-of-sight to the goals of the agency and supporting better mission accomplishment.
- Strong leadership commitment, management accountability, and employee involvement are required to improve organizational readiness and to build advocacy for acceptance of the new compensation system.
- FAA managers and HR professionals are faced with the challenge of learning and performing new roles and responsibilities under the Core Compensation Plan to manage more effectively the agency's human resources.
- FAA employees are willing to embrace and participate in change initiatives supporting a new performance-based FAA culture.
- Continued implementation for a longer period of time and across a broader segment of the FAA workforce will provide more information to determine the impacts of the new compensation system and whether the intended compensation objectives are met.

The evaluation concluded that the agency should persevere with the implementation of the Core Compensation Plan and its components and develop appropriate interventions to address manager and workforce readiness issues. Future assessment and evaluation of the new pay system implementation and outcomes will be very important to determine if long-term objectives are achieved. Ultimately, the success of the Core Compensation Plan will be driven by commitment from top leadership, management accountability and responsibility, acceptance from employees, effective communication and training, and integration of supporting HRM systems.

### **Accuracy and Timeliness of Procurement Data in the FAA's ACQUIRE System (FAA)**

The FAA conducted an evaluation of fiscal year 2000 procurement data in its ACQUIRE system to determine the accuracy and timeliness of information reported to the Office of the Secretary of Transportation (OST). The evaluation objectives were to determine whether reports using data in the system were at least 95 percent accurate and whether correct contracting data was entered into the system within 30 days of contract award. To make this determination, the evaluation team reviewed a

statistically significant random sample of procurement transactions that represented the total contract population in each of the agency's 12 regions/centers.

The evaluation team concluded that on a consolidated basis, 92 percent of the procurement data reported to OST were accurate based on a comparison of the ACQUIRE data download and contract file documentation. On a regional basis, the accuracy percentage ranged from 88.3 percent (Headquarters) to 95.2 percent (Central Region). Based on contract file documentation, the evaluation team could not determine the accuracy of 4.5 percent of the consolidated procurement data. While the consolidated results did not reach the 95 percent accuracy requirement, there were mitigating factors. The evaluation team could not determine the accuracy of certain data elements based on information in the contract file and did not have the time or resources to take the additional steps that would have been necessary to validate this information, such as contacting suppliers directly. Also, the evaluation team could not confirm the accuracy of 2 percent and 1.3 percent of the data elements for the Aeronautical Center and the Southwest Region, respectively, because a critical data element had not been provided in the ACQUIRE data download received from the Office of Acquisitions. The evaluation team was not aware of this oversight until after the fieldwork was completed. It is possible that the consolidated results would have reached the 95 percent accuracy requirement if all data elements in the sample had been validated.

The evaluation team also concluded that on a consolidated basis, 79.2 percent of the ACQUIRE procurements were timely (i.e., entered in the ACQUIRE system within 30 days after contract award) based on a comparison of the system-generated *Reserved/Approved Date* and signed legal documentation in the contract file. On a regional basis, timeliness ranged from 59.7 percent (Western Pacific Region) to 93.8 percent (Aeronautical Center). The evaluation team could not validate the timeliness of 6.6 percent of the consolidated ACQUIRE procurements because the contract file did not include documentation indicating when the contracting officer signed the contract or modification. There was a lot of confusion in the regions/centers regarding timeliness because the 30-day timeliness requirement had not been communicated to the regions/centers. In addition, the FAA's procurement guidance did not include timeliness criteria. As a result, the standard operating procedures for when data was to be entered in ACQUIRE varied widely from region to region. Also, certain real estate and utility procurements did not lend themselves to the 30-day timeliness requirement.

The evaluation included eight recommendations for improving the accuracy and timeliness of procurement data reported to OST. These recommendations included conducting periodic quality assurance reviews, expanding exception reports, modifying ACQUIRE guidance, addressing inconsistencies in ACQUIRE guidance, setting requirements for contract file documentation and vendor file maintenance, incorporating ACQUIRE guidance into the FAA's Acquisition System Toolset, and providing training that includes "lessons learned" from the evaluation. The FAA's Director of Acquisitions agreed with the recommendations and has taken action to implement the recommendations.

### **Switching Operations Facility Analysis (FRA)**

The Federal Railroad Administration's (FRA's) Office of Safety sponsored a Switching Operations Fatalities Analysis Working Group to review fatal incidents and develop recommendations for reducing fatalities in switching operations. The working group included representatives from the FRA, Association of American Railroads, United Transportation Union, Brotherhood of Locomotive Engineers, and American Short Line and Regional Railroad Association. Its charter was to "conduct a detailed fact-finding review and analysis of these incidents to determine whether trends or patterns can be found, identify best practices, and, if possible, formulate recommendations for the entire industry based on its findings."

The major findings of the working group were:

- The occurrence of fatalities in switching yards did not decrease over the period under investigation (January 1992 through July 1998).
- Fatalities are not often the result of a single precipitating cause. Almost always, they are a result of multiple possible contributing factors.

- Although a great deal of data was reviewed with regard to time, location, number of crew on duty, and several other possible contributing factors, none of the data could be interpreted reliably because there was not sufficient exposure data. Better exposure data are needed to understand the frequency of occurrence of various conditions in the absence of a fatality.
- Despite the voluminous amount of detail available and the quality of each technical summary, there were still information gaps in fatality reports that had originally been collected by the FRA. A much broader range of information would greatly improve the ability to interpret possible contributing factors.

The working group generated two sets of specific recommendations. First, based on the data reviewed, a set of five recommendations was made to improve the safety of switching operations. From these safety recommendations, the so-called five "LIFESAVERS" program was developed. Second, a series of recommendations were developed to improve the methodologies used by the FRA and the industry to report employee fatalities, with particular emphasis on improving data collection.

### **Selected Safety Initiatives (FHWA)**

Each State is required to develop and implement, on a continuing basis, a highway safety improvement program (HSIP) that has the overall objective of reducing the number and severity of crashes and decreasing the potential for crashes on all highways. The requirements for a highway safety improvement program are to include components for planning, implementation, and evaluation of safety programs and projects. These projects are to be developed by the States and approved by the FHWA.

The FHWA Safety Core Business Unit, in conjunction with the Office of Corporate Management, conducted a program review of the HSIP in six States--Delaware, Oregon, Connecticut, Florida, Ohio and Iowa-- between February and April 2001. The primary objective of this review was to document best practices of the HSIP by highlighting those practices that are uniquely best in each State and sharing this information with the safety community.

The review team found numerous, noteworthy activities being carried out by the States. Among the general best practices identified in a number of the States visited were the following:

- Having safety as a major goal of the agency, with commitment at the highest levels. For example, in several of the States visited, the Governors played an active role in promoting safety.
- Having a good multi-disciplinary safety management process in place, with a strong component for roadway safety.
- Emphasizing safety on all projects.
- Having a Safety Engineer in the State DOT as the focal point for the HSIP.
- For the larger States with Regional structures, having Safety Coordinators in each Region.
- Having community-based Traffic Safety Programs.
- Assisting localities.
- Using current technologies (e.g. Photologging, GIS, and web-based systems)

### **Interim Report on U.S. Large Truck Crash Causation Study (FMCSA)**

As required by the Motor Carrier Safety Improvement Act of 1999, the Federal Motor Carrier Safety Administration (FMCSA) is conducting a multi-year large truck crash causation project in collaboration with NHTSA. This project is the first national effort to collect crash data for the purpose of determining the causes of, or factors contributing to, large truck crashes so that FMCSA and others can implement countermeasures to reduce the occurrence and severity of these crashes. During 2001, FMCSA prepared an interim report describing the approach being used in the large truck crash causation project and issues that were identified during the implementation of the pilot phase of the project.

The large truck crash causation project involves the collection of data from crash scenes about the drivers, vehicles, roadway, and environment. Teams comprised of State truck inspectors and crash researchers from NHTSA's National Automotive Sampling System (NASS) are dispatched to crash sites. The NASS researchers collect physical data about the accident and interview the drivers (or their surrogates) and witnesses, and the State truck inspectors conduct North American Standard Level 1 truck and truck driver inspections. Using statistical association, these data are used to determine the factors connected with crashes and how much each factor contributes to the increased risk of crashes.

In May 2000, pilot data collection and analysis efforts on crashes commenced at four study sites: Philadelphia, Chicago, Prince Georges and Charles counties in Maryland, and La Paz and Yuma counties in Arizona. The major challenges identified during the pilot were: (1) training police dispatchers to recognize crashes of interest to the large truck crash causation project and notifying the investigating teams; (2) finding, training, and retaining staff to serve on the investigation teams; (3) acclimating NHTSA's NASS researchers and State truck inspectors to a new crash study approach; and (4) maintaining a new level of cooperation from hundreds of local police jurisdictions.

Following the pilot, the large truck crash causation project was rolled out nationwide. Investigation teams have been dispatched to 24 locations in 17 States. Data collection and analysis efforts will continue through 2003, with a report on preliminary findings to be issued by the end of 2002. The study will conclude in 2004 with the release of a Final Report of the results of the study.

### **Safety Data Quality Improvement (BTS)**

The Safety Data Initiative began in response to DOT's 1999 National Transportation Safety Conference, where stakeholders identified better data collection and reporting across all jurisdictions as one of the top priorities to improve safety. In September 2000, the Bureau of Transportation Statistics (BTS) drafted the Safety Data Action Plan (the Plan) under the direction of the DOT Safety Council. The plan recommended ten cross-modal projects to address specific data quality problems and data gaps.

Under the guidance of BTS, working groups have done background research aimed at the development of implementation plans for the projects outlined in the Safety Data Action Plan. The major goal of the project is to provide DOT with a new level of data quality, sufficient to identify, quantify, and minimize the risk factors in U.S. travel.

The Safety Data Action Plan identified ten projects to focus on addressing specific shortcomings in current data collection and data quality within the various DOT database systems. These ten projects were organized into four broad areas: (1) improving the quality, comparability, and timeliness of existing data; (2) collecting better data on accident circumstances, precursors, and leading indicators; (3) expanding the use of technology in data capture; and (4) improving analytical capability. To date, four of the ten projects have been completed.

- Develop common criteria for reporting injuries and deaths. Transportation-related deaths and injuries are key measures of interest in the Department's Strategic Plan. Currently, definitions and reporting criteria for injuries and deaths are inconsistent across the modes. This variety of criteria makes aggregate counts of transportation deaths and injuries misleading and cannot be used reliably to present trends or make comparisons across modes. The objective of this project was to develop recommendations for a standard for coding common data elements and injuries across databases. This would ensure uniformity in injury event definitions and reporting criteria across modes and include sufficient mechanistic causal information for development of intervention strategies.

Recommendations have been developed to promote commonality among modes and improve the quality and utility of mechanistic incident and injury data for development of preventive strategies. Common definitions have been proposed for a reportable event, a fatality, and an injury. Additional recommendations include: (1) the development of an injury reporting system including mode-specific codes when necessary; (2) sampling as a way of limiting the reporting burden when a large numbers of incidents occur (i.e., highways), and (3) exploring opportunities for linking transportation databases to hospital databases, State or territory vital statistics, and other medical databases.

- Develop common denominators for safety measures. Each of the modes uses a different set of denominators for evaluating changes in safety risk. This variety makes aggregation or comparison unworkable, limits researchers' ability to perform comparative risk analysis across modes, and limits the Department's ability to reliably allocate resources across modes. The goal of this project was to define a set of denominators that can be used to characterize transportation safety in a comparable way for comparable circumstances -- i.e., to allow the risk of recreational boating to be compared to the risk of recreational flying or recreational driving.

Specific exposure measures, suitable for cross modal comparison, have been identified based on the particular transportation activity. These activities include: passenger transportation, freight transportation, recreational use, and occupational activities. Detailed recommendations have been made to ensure that appropriate exposure data are collected within each mode.

- Develop common data on accident circumstances. Currently, there is no consistency in the collection of data on accident circumstances across modes. This inconsistency inhibits the sharing of information and fails to take advantage of advances in different modes. The objective of this project is to expand our understanding of data needed to identify causes of accidents, and to facilitate and support statistical analysis of data across a wide variety of accidents - even in different modes.

Using research on classifying accident circumstances, a prototype set of data elements has been developed. The use of new technologies in collection efforts, such as event data recorders, is being explored as a way to generate consistent accident information across various environments.

- Explore options for using technology in data collection. Better use of technology could greatly facilitate more timely data collection and improve data quality, since the likelihood of human error will decrease, and it may also be more cost-effective. The objective of this project is to explore options for using new technology to improve data collection and reporting.

The main focus of this report is identifying technologies that can be used across modes and can significantly improve the timeliness, accuracy, and coverage of DOT data collection. Recommendations for further research include pilot studies in the following three areas: Electronic Identification/Security Smart Cards, Operator Performance Monitoring (alerts operators to lapses in concentration), and Hands-Free Operation (wearable computers for data collection).

### **Alternative Dispute Resolution (Office of the Secretary)**

Alternative Dispute Resolution (ADR) describes a variety of collaborative and voluntary problem-solving processes that usually involve a neutral third party. The purpose of the ADR Program Evaluation was to: (1) collect data on how the Department is using ADR; (2) examine and assess whether DOT is resolving Equal Employment Opportunity/Equal Opportunity (EEO/EO) disputes in a cost-effective, mutually acceptable manner compared to the traditional processes for resolving these disputes; (3) identify best practices for resolving EEO/EO disputes through ADR; and (4) make recommendations for improving dispute resolution in the Department.

The data collection showed that the Department is using ADR to resolve disputes in a variety of areas, both where formal ADR programs exist and on an ad hoc basis. The areas in which ADR activity was reported included: procurement, environmental justice, rulemaking, workplace/personnel, and in discussions with regulated entities.

The main emphasis of the evaluation was to examine the three different EEO/EO ADR programs within the Department. The Departmental Office of Civil Rights is responsible for a Department-wide Sharing Neutrals Program. The FAA has a nationwide mediation program, and the U.S. Coast Guard (USCG) has established policies and procedures on the use of ADR to resolve discrimination complaints, has trained employees to act as mediators, and has a pilot program in place.

The evaluation found that all three programs were established in accordance with principles outlined by the Equal Employment Opportunity Commission and the Federal ADR Council. Although customer service appears high, the programs are not tracking whether they are meeting all of their intended goals, such as

time and cost savings, early resolution of the complaint, and more hospitable work environment. To leverage resources and avoid redundancy of efforts, the evaluation recommended that the three programs work together to collect and track data on shared goals, use the same customer satisfaction survey, and coordinate budget requests.

With regard to the effectiveness of the three programs, the evaluation recommended extensive training and practical experience for neutrals. The evaluation recommended that the USCG assess the results of its pilot program before expanding it. The evaluation also recommended that all Departmental employees receive awareness briefings on the EEO/EO mediation programs. With regard to dispute resolution generally, the evaluation recommended that prior to the implementation of any ADR programs a needs assessment should be conducted, and the program should begin with a pilot program that is evaluated prior to program expansion.

Finally, the evaluation noted that some matters are taken to the EEO/EO mediation programs when miscommunication, rather than discrimination, is the cause of the conflict. The evaluation suggests further evaluation to determine whether there should be a Department-wide human resource strategy to make ADR available for workplace disputes. Such an effort would be consistent with the Department's Organizational Excellence goal of improving employee satisfaction and effectiveness.

### **Maritime Security Program (MSP) and Volunteer Intermodal Sealift (VISA) Agreement (MARAD)**

MARAD evaluated the Maritime Security Program (MSP) and the Voluntary Intermodal Sealift Agreement program (VISA) to determine whether the programs are helping to achieve the Department of Transportation (DOT) national security strategic goal. In particular, the evaluation assessed the impact of the MSP and VISA in achieving the DOT outcome of increasing the capability of the transportation system to meet national defense needs.

The purpose of the Maritime Security Program (MSP) is to ensure that an active U.S.-flag merchant fleet of militarily useful general cargo vessels in international trade, and the trained personnel needed to operate both active commercial and Government-owned reserve vessels, are available to meet U.S. economic and national security requirements. The MSP was implemented in response to the decline of the U.S.-flag general cargo fleet and concern over whether it could continue to serve adequately both the economic and national security objectives of U.S. maritime policy in the future.

VISA provides contractual arrangements with private U.S.-flag ship operators to make intermodal transportation services available in times of national emergency. VISA provides DOD with assured access to emergency intermodal sealift capacity that complements DOD's organic sealift capabilities in a coordinated, seamless transition from peace to war. The MSP and VISA programs have not been tested in an actual mobilization because there has not been a major contingency since they were created.

To determine the impact of the MSP and VISA programs, MARAD compared the relevant outcomes of the members of two similarly situated groups of U.S.-flag privately owned general cargo ships in foreign trade. The program group is defined as U.S.-flag privately owned general cargo vessels that participated in MSP during 1996-2000. Similarly situated ships that were never in MSP represent the control group. By comparing changes in the two groups over time, differences between them could be attributed to the influences of the MSP. From the available quantitative and qualitative information, MARAD determined the effects and impact of MSP and VISA on the U.S.-flag fleet and reached the following conclusions:

- MSP and VISA are operating in accordance with the statutory intent of the Maritime Security Act to ensure the availability of vessels to meet U.S. economic and national security objectives. These programs also contribute to the achievement of DOT and MARAD national security goals.
- MSP and VISA provide a significantly improved mechanism over previous programs to obtain sealift to meet mobility requirements. These improvements include pre-planned committed capacity, which facilitates rapid deployment to meet DOD delivery requirements; commercial intermodal resources for cost-effective door-to-door service; and flexibility for operators to maintain commercial routing during contingencies.

- The overall health (as measured by average age and cargo capacity) of the group of U.S.-flag ships receiving MSP payments has improved compared to the control (non-MSP) group. By comparing these two similarly situated groups, it was found that the MSP payment was the most significant factor affecting the health of the U.S.-flag dry cargo fleet. If the MSP payment continues to decrease in value, or is eliminated, there are no apparent external factors that would halt the overall decline in the health of the U.S.-flag foreign trade fleet.

**Federally Funded Maritime Education and Training (MARAD)**

During FY 2001, MARAD continued its evaluation of the impact of federally funded officer education programs on the achievement of DOT national security goals. The program evaluation, which is also a congressionally required report, will be submitted to Congress in FY 2002.

## SCHEDULE FOR FY 2002 PROGRAM EVALUATIONS

The following table lists DOT program evaluations that are being conducted in fiscal year 2002. The table presents the titles or subject matter of the evaluations, the strategic goal or goals they support, and the methodology and scope of the studies.

Program Evaluation	Strategic Goals					OE	Methodology	Scope
	S	M	EG	E	HS			
Strategy for Migrant Interdiction Program (USCG)					X		Management Study	Evaluate inter-agency strategy for migrant interdiction
Recreational Boating Fatality Data Capture (USCG)	X					X	Management Study	Evaluate data collection and analysis of boating fatalities
Maritime Safety Program Impact (USCG)	X						Combination	Evaluate the impact of safety strategies on maritime fatalities, injuries, and property (Interim Report)
Great Lakes Icebreaking (USCG)		X	X				Combination	Evaluate the impact of Great Lakes ice-breaking on mobility of goods and customer requirements
Airport Noise (FAA)				X			Longitudinal	Evaluate effectiveness of the Airport Improvement Program's noise set-aside in reducing the noise-impacted population around airports
Aviation Safety Program Instructional Methodologies (FAA)						X	Management Study	Evaluate the effectiveness and efficiency of instructional methodologies used in the Aviation Safety Program

### Legend

- S Safety
- M Mobility
- EG Economic Growth
- E Environment
- HS Homeland Security
- OE Organizational Excellence

### Methodology

- Longitudinal – Study of data points or data series before and after intervention
- Cross Sectional – Study of different groups or sites at the same point in time
- Statistical – Regression or other statistical analysis
- Combination – Use of two or more complementary analytic techniques
- Management Study – Process evaluation using objective measurement and analysis
- Cost Benefit – Comparison of a program's outputs or outcomes with the costs to produce them

Program Evaluation	Strategic Goals					OE	Methodology	Scope
	S	M	EG	E	HS			
Runway Safety (FAA)	X					X	Management Study	Analyze the performance of the FAA lines of business responsible for runway safety activities
TIFIA Program (FHWA)		X	X				Management Study	Assess the implementation of the TIFIA program and the financial performance of projects receiving TIFIA assistance
Safe Miles and CR Impact Assessment (FMCSA)	X						Combination	Assess the effectiveness of on-site compliance reviews and the roadside inspection program
Job Access and Reverse Commute (FTA)		X	X	X			Combination	Evaluate the Job Access program's impact on connecting welfare recipients and low-income persons to employment and support services
Buckle Up America, Phase 1 (NHTSA)	X						Longitudinal and Cross-sectional	Evaluate the 1996-2000 joint efforts by NHTSA and its private sector partners to increase use of safety belts and child safety seats
Pipeline Safety (RSPA)	X			X		X	Combination	Evaluate the effectiveness of the Office of Pipeline Safety enforcement policies
Federally Funded Maritime Education and Training (MARAD)					X		Combination	Study the impact of federally funded maritime education on the availability of mariners for defense mobility