



NTSB National Transportation Safety Board

Driver and Vehicle Safety Issues: An NTSB Perspective

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Board Member

American Association of Motor Vehicle Administrators
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UNITED STATES CODE, TITLE 49

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SUBCHAPTER 5—GENERAL

§1181. Definitions

Section 40102(a) of this title applies to this chapter.

SUBCHAPTER 6—ORGANIZATION AND ADMINISTRATIVE

§1183. General organization

(a) ORGANIZATION.—The National Transportation Safety Board is an independent constitutional body of the Government.

(b) APPOINTMENT OF MEMBERS.—The Board is composed of 5 members appointed by the President, by and with the advice and consent of the Senate. Not more than 3 members may be appointed from the same political party. Members shall be appointed on the basis of technical qualification, professional standing, and demonstrated knowledge of accident reconstruction, safety engineering, human factors, transportation safety, or transportation regulation.

(c) TERMS OF OFFICE AND REMOVAL.—The term of office of each member is 7 years. At the end of the term, the President may appoint a member to fill a vacancy occurring before the expiration of the term for which the predecessor of that member was appointed for the remainder of that term. When the term of office of a member ends, the successor may not be a successor in office.

(d) CHAIRMAN AND VICE CHAIRMAN.—The President shall designate, by and with the advice and consent of the Senate, a Chairman of the Board. The President also shall designate a Vice Chairman of the Board. The terms of both the Chairman and Vice Chairman are 2 years. When the Chairman is absent or unable to perform the duties of the office, the Vice Chairman shall perform the duties of the office.

Mission

The NTSB is charged with:

- 1) determining the probable cause of transportation accidents
- 2) making recommendations to prevent their recurrence



The NTSB is Responsible for Investigating:

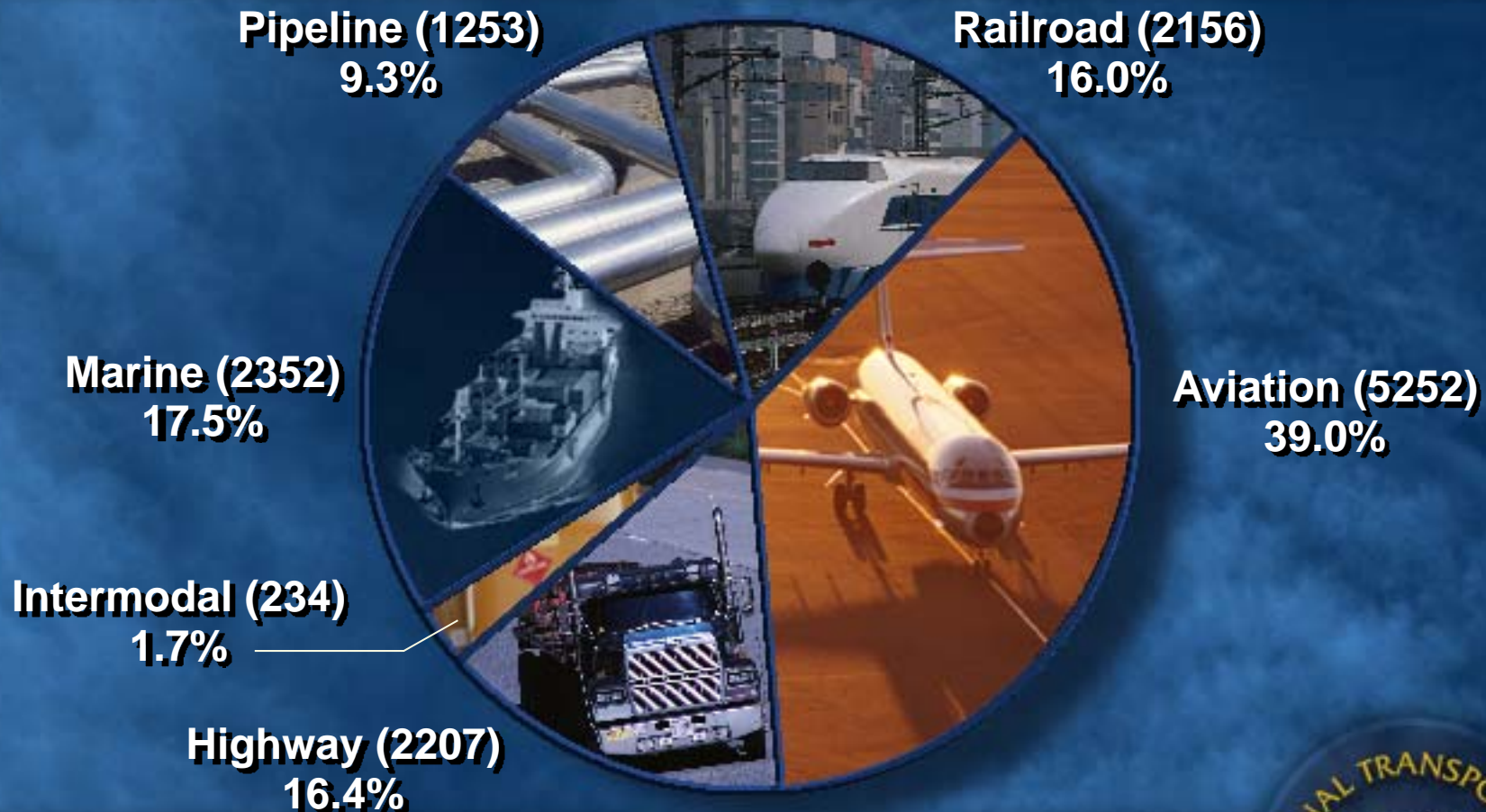
- Aviation, highway, rail, marine, pipeline, and hazardous material accidents





- 130,000+ accident investigations
- 13,000+ safety recommendations
 - 82% acceptance rate

13,454 Safety Recommendations issued since 1967



NTSB Most Wanted List

Critical changes needed to reduce transportation accidents and save lives.



NATIONAL TRANSPORTATION SAFETY BOARD

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MOST WANTED LIST

A program to increase the public's awareness of, and support for, action to adopt safety steps that can help prevent accidents and save lives. The following are ten of the current issues.



Addressing Human Fatigue



General Aviation Safety



Safety Management Systems



Runway Safety



Bus Occupant Safety



Pilot & Air Traffic Controller Professionalism



Recorders



Teen Driver Safety



Addressing Alcohol-Impaired Driving



Motorcycle Safety



NTSB Most Wanted List

Critical changes needed to reduce transportation accidents and save lives.

NTSB Most Wanted List



General Aviation Safety

Reducing GA fatality rates can be achieved with efforts to improve aircraft design and maintenance, pilot risk management skills, and pilot training and mentoring.



Runway Safety

Making runways safer will require improving situational awareness through such measures as in-cockpit warnings of potential conflicts, specific air traffic control clearances for each runway crossing, accurate information provided to pilots about runway conditions, properly functioning equipment that is correctly set for takeoff or landing, and distance assessments calculated for all landings.

Bus Occupant Safety

Bus passengers need better protection. Uniform Federal standards for roof strength, window glazing, and occupant protection are needed to ensure that bus passengers are better protected in crashes just as they are in passenger cars.



Safety Management Systems

Aviation, marine, highway and rail operators can benefit from implementing a safety management system in which deficiencies are identified and addressed before they result in an accident.

Recorders

Recorders provide critical information about vehicle performance, vehicle dynamics, and occupant kinematics to help identify crash and injury causes. With the data they provide, investigators can then develop more targeted safety recommendations.

Teen Driver Safety

Comprehensive teen driver safety programs should include beginner and intermediate licensing stages, restrict the hours during the day when teens can drive, limit the number of passengers in the car with a teen driver, and prohibit the use of interactive wireless communication devices by teen drivers.



Addressing Human Fatigue

Fatigue countermeasures should include hours-of-service limits that are data driven, mechanisms to identify and treat sleep-related medical impairments, and a science-based fatigue management system.

Addressing Alcohol-Impaired Driving

Addressing alcohol-impaired driving requires a comprehensive program that includes sobriety checkpoints, administrative license revocation, assessment and treatment combined with vehicle sanctions, and such alternatives as dedicated jail/treatment facilities, home detention with electronic monitoring, or intensive supervision probation.

Motorcycle Safety

Wearing a motorcycle helmet that complies with DOT standards is the single best measure to reduce the risk of injury or death in a motorcycle accident.



Pilot and Air Traffic Controller Professionalism

Improve pilot and air traffic controller professionalism through training, monitoring, and a focus on best practices and personal responsibility.



NTSB Most Wanted List

Critical changes needed to reduce transportation accidents and save lives.



About the NTSB

The National Transportation Safety Board (NTSB) is an independent agency charged by the U.S. Congress with investigating transportation accidents, determining their probable cause, and promoting transportation safety.

Most Wanted List

The NTSB's Most Wanted List highlights safety issues identified from the NTSB's accident investigations to increase industry, congressional, and public awareness about the issues and recommended safety solutions.



NTSB Most Wanted List

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Date Modified: July 2011



Most Wanted List



Critical changes needed to reduce transportation accidents and save lives

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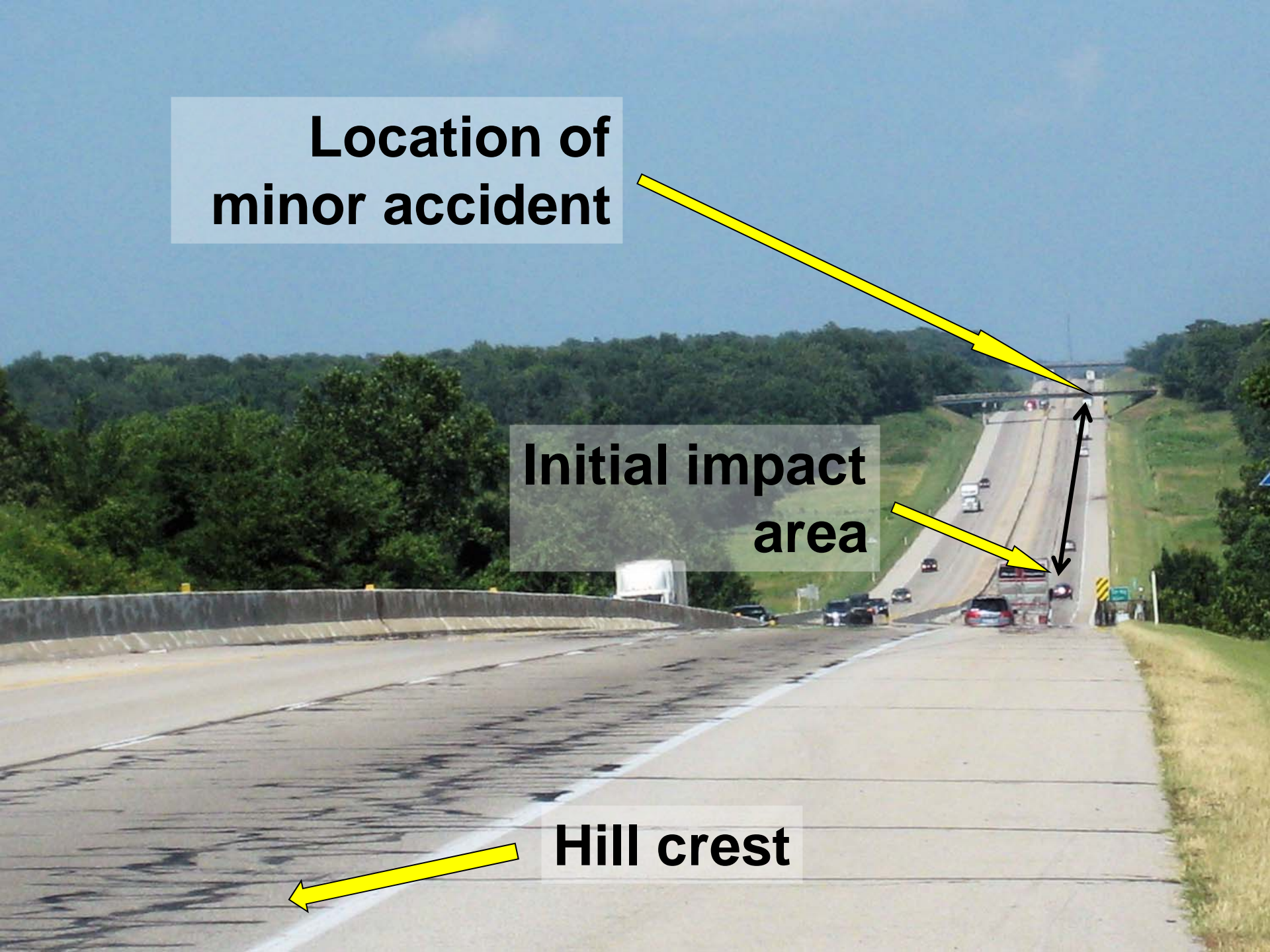
Miami, Oklahoma (June 26, 2009)

- Initial minor accident (~1:13 pm)
 - blocked eastbound I-44
- 2008 Volvo truck-tractor (~1:19 pm)
 - refrigerated semitrailer
 - traveling eastbound on I-44
 - 69 mph with cruise control engaged
 - without slowing or braking collided into queue of slowing & stopped vehicles

**Location of
minor accident**

**Initial impact
area**

Hill crest



10 fatalities
3 serious injuries
2 minor injuries
5 no injuries

**Ford
Windstar**



**Hyundai
Sonata**

**Kia
Spectra**

Fatigue Factors

- Off work for 3 weeks
- Kept day active/night sleep schedule when off
- Had one work day prior to accident
- 3am to 3pm shift work/drive schedule (since 1997)
- Obtained min 3 hrs/max 5 hrs sleep prior to accident
- Early bedtime (2 hr phase advance in sleep time)
- Subsequently diagnosed with mild sleep apnea

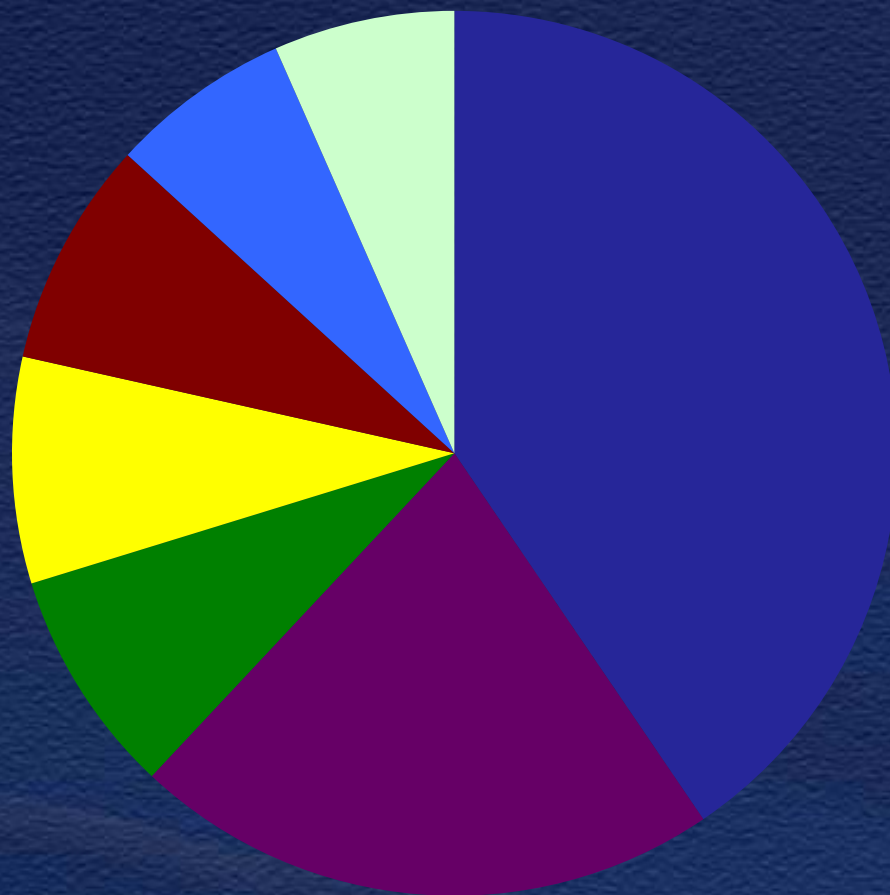
Probable Cause (fatigue)

“ . . . driver’s fatigue, caused by the combined effects of acute sleep loss, circadian disruption associated with his shift work schedule, and mild sleep apnea, which resulted in the driver’s failure to react to slowing and stopped traffic ahead by applying the brakes or performing any evasive maneuver to avoid colliding with the traffic queue. . . . ”

NTSB Recommendations

- MOST WANTED since 1990
- ~200 fatigue recommendations
- 60+ in highway

Complex Issue: Requires Multiple Solutions



- Scheduling Policies and Practices
- Education
- Organizational Strategies
- Raising Awareness
- Healthy Sleep
- Vehicle and Environmental Strategies
- Research and Evaluation

TRUCK & BUS

S A F E T Y

A Decade of Progress



NTSB Safety Forum May 10-11, 2011

- Carrier Oversight and Operations
- CDL Licensing
- Driver safety and health
- Vehicle technology
- Crash mitigation

NTSB



NTSB Truck & Bus Safety Forum

- Carrier oversight:
 - determination of carrier safety fitness by Federal, state, and industry organizations
- Carrier operations:
 - electronic onboard recorders, hours of service, safety culture, and vehicle size and weight
- Training and licensing of commercial drivers:
 - commercial learner's permits, employer notification systems, graduated licensing, and data collection
- Driver safety:
 - driver crash risk factors, approaches to enhance

NTSB Truck & Bus Safety Forum

- Driver health:
 - health and wellness programs, progress toward comprehensive medical oversight for interstate commercial drivers
- Enhanced vehicle technologies:
 - crash avoidance technologies (electronic stability control, collision avoidance systems)
- Advances in crash mitigation:
 - passenger restraints, vehicle crashworthiness, vehicle compatibility, and highway barrier systems



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New York, NY

Motorcoach Accident

March 12, 2011



NTSB





Courtesy of media.fresnobee.com

March 12, 2011 in Bronx, NY

- ~5:37 am returning to NYC from CT
- Departed the travel lanes to the right, crossed over a paved shoulder, and struck a roadside barrier
- Bus then traveled nearly 500 feet while rolling over until colliding with a 9-inch diameter highway signpost
- Impact drove pole through bus's windshield, severing the roof panel from the body for nearly the length of bus
- 15 fatalities



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Doswell, VA

Motorcoach Overturn
May 31, 2011

May 31, 2011 in Doswell, VA

- ~ 0455 EDT, 2000 Setra motorcoach, operated by Sky Express Inc,
 - traveling northbound (I-95)
 - 37-year-old driver and 60 passengers
 - departed Greensboro, North Carolina, en route to NYC
- Entered left-hand curve as departed from interstate right lane; crossed over rumble strips onto paved right shoulder
- Left the roadway, entered grass embankment, collided with a 3-strand cable barrier; rolled 180 degrees to the right
- The motorcoach came to rest on its roof about 460 feet from the point at which it had departed the roadway
- 4 fatalities

Doswell, VA



NTSB



Safety Oversight

- Motorcoach operations transport 750 million passengers/yr (800 million passengers in commercial aviation)
- Motorcoach one of the safest modes, averaging less than 20 fatalities per year (vs. about 70 in aviation)
- Combined total of 166 open NTSB safety recommendations issued to DOT, NHTSA, FMCSA, FHWA, PHMSA
- 100 NTSB recommendations relate to motorcoach safety

Motorcoach Safety Action Plan

U.S. Department of Transportation Motorcoach Safety Action Plan



November 2009

NTSB





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