NTSB National Transportation Safety Board

Safety Management: Learning from Accidents

The Passenger Vessel Association Annual Convention

January 29, 2012

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NTSB Mission

The NTSB is an independent US federal agency charged with determining the probable cause(s) of transportation accidents, making recommendations to prevent their recurrence, conducting special studies and investigations, and coordinating resources to assist victims and their families after an accident.

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NTSB Most Wanted List

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.

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NTSB Most Wanted List

1. General Aviation Safety

2. Runway Safety

3. Bus Occupant Safety

4. Safety Management Systems

5. Recorders

6. Teen Driver Safety

7. Addressing Human Fatigue

8. Addressing Alcohol-Impaired Driving

9. Motorcycle Safety

10. Pilot and Air Traffic Controller Professionalism

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Maritime Security

- September 11, 2000

- Maritime Security Act 2002

- Vessel Security Plans

- TWIC

- Coast Guard competing interests: safety v. security

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Safety is Good Business

"Safety culture

is enlightened self interest"

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NTSB and SMS in the Marine Industry

NTSB/MAR-02/02
PB2002-916402

Marine Accident Report

Fire On Board the
Small Passenger Vessel
Port Imperial Manhattan, Hudson River
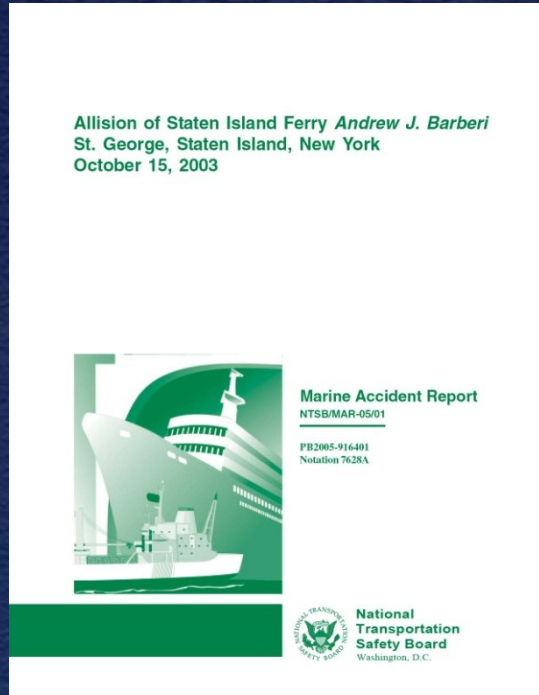New York City, New York
November 17, 2000

National
Transportation
Safety Board
Washington, D.C.

Photo Port Imperial Manhattan

- 11/17/2000 – Port Imperial Manhattan, Hudson River, New York

- $1.2 million in damages.

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NTSB and SMS in the Marine Industry

Allision of Staten Island Ferry *Andrew J. Barberi*
St. George, Staten Island, New York
October 15, 2003

Marine Accident Report
NTSB/MAR-05/01

PB2005-916401
Notation 7628A

National Transportation Safety Board
Washington, D.C.

-October 15, 2003 – Staten Island, New York

-Allision of the Andrew J. Barberi with a maintenance pier

-11 fatalities and 70 injuries

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SMS in Marine

- International Requirements ISM/SMS (Chapter IX of SOLAS)

- Domestic Requirements –

  - Towing Vessels –
    - Coast Guard Reauthorization Act 2004
    - NPRM – August 2011
  - Passenger Vessels - Coast Guard Reauthorization Act of 2010

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PVA and Safety

- Long standing relationship with USCG

  – USCG-PVA Quality partnership (1996)

- Passenger Vessel Foundation (1994)

  – Roger Murphy National Maritime Safety Award

- Safety and Security Committee

  – Formerly, the Safety and Loss Control Committee

- Flagship – initiative on SMS

  – Partnership Charter with USCG (2009)

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PVA and Safety

USCG's Streamlined inspection program

v.

SMS

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PVA Initiatives

Flagship under development

Opportunity:

Include data collection

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Recorders – An Investigator's Tool

- Allision of the Axel Spirit with the Ambrose Light

- November 3, 2007

- Allision of the Orange Sun and moored dredge

- January 24, 2008

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Recorders – An Investigator's Tool

- Collision between the Block Island and the Morro Bay

- July 2, 2008

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Recorders – Part of SMS

09/14/2008 19:36

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The Value of Operational Data

- Aviation Industry

  – Early recorders – accident investigation
  – Late 80's – flight data used for operational quality assurance
  – Late 90's – data used for SMS
  – 2000's – aggregated data for norms and comparisons
  – Late 2000's – aggregated data merged with air traffic and system data

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Conclusion

- Safety is good business

- PVA has a great opportunity – as Flagship is under development, ensure it is comprehensive by including recording devices

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