

**Statement  
of the  
National Air Transportation Association  
before the  
Subcommittee on Aviation,  
Committee on Transportation and Infrastructure,  
U.S. House of Representatives:**

**Hearing on  
The National Transportation Safety Board's  
Most Wanted Aviation Safety Improvements**

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**2167 Rayburn House Office Building  
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**Appearing for NATA:  
James K. Coyne, President**

Chairman Costello, Ranking Member Petri, and Members of the Subcommittee:

Thank you for this opportunity to appear before you to discuss the National Transportation Safety Board's (NTSB) Most Wanted Aviation Safety Improvements. My name is James K. Coyne, and since 1994, I have served as president of the National Air Transportation Association (NATA). NATA, the voice of aviation business, is the public policy group representing the interests of aviation businesses before the Congress, federal agencies and state governments. NATA's over 2,000 member companies own, operate and service aircraft and provide for the needs of the traveling public by offering services and products to aircraft operators and others such as fuel sales, aircraft maintenance, parts sales, storage, rental, airline servicing, flight training, Part 135 on-demand air charter, fractional aircraft program management and scheduled commuter operations in smaller aircraft. NATA members are a vital link in the aviation industry providing services to the general public, airlines, general aviation and the military.

I am also pleased to be testifying alongside a good friend and colleague of mine, Bill Voss, President and CEO of the Flight Safety Foundation. The work of the Flight Safety Foundation, of which I currently serve on the Board of Governors, has led to dramatic improvements in aviation safety over the last half-century in both the commercial and general aviation sector of our industry. I believe that this unprecedented period of aviation safety in which we currently live is directly attributable to the collaborative efforts of the organizations like the Flight Safety Foundation, working side-by-side with industry experts and government leaders to implement operational and technological changes that have improved the lives of all Americans who rely on safe and efficient air transportation.

During my tenure at NATA, I have made it a priority for the association to develop strong relationships with NTSB Board Members and staff, to foster an ongoing dialogue that will prove beneficial to both organizations. I have met personally with every member of the Board to discuss NATA's safety initiatives and have been impressed with the direction the Board is moving in several areas. Today's hearing provides an excellent opportunity to review, comprehensively, many of these important issues facing our industry, and to hear from both the NTSB and the FAA regarding their efforts to address these concerns. NATA looks forward to working with both agencies to provide advice on how we can best meet these critical goals.

### **NTSB Most Wanted Aviation Safety Recommendations**

Five of the National Transportation Safety Board's top 6 "most wanted" aviation safety improvements currently bear an "unacceptable" response from the FAA. My testimony will discuss those 5 areas deemed unacceptable by the NTSB, and will describe actions taken by NATA and the aviation industry as a whole to alleviate many of the concerns voiced by the Board. In many cases, the Subcommittee will discover that the industry is well ahead of the FAA and other government agencies in implementing operational and technological changes that will address these concerns. Overall, NATA is generally supportive of the recommendations made by the NTSB in these five areas, but has concerns with the application of some of the NTSB proposals, particularly regarding the difficulty of retrofitting existing aircraft to comply with some of the suggested changes.

Specifically, NATA supports the recommendations made by the NTSB in regard to the dangers posed by known icing conditions, as well as recommendations to increase requirements for cockpit voice and data recorders, and extend the duration of time recorded by this equipment. However, any FAA rules requiring technological improvements should remain forward-fitting and not apply to existing aircraft, as such upgrades will disproportionately affect small general aviation aircraft. NATA agrees with the recommendations regarding runway safety and believes the NTSB and FAA are focusing the correct amount of attention the issue's top concern: runways at large commercial airports. NATA

also contends that the best approach to runway safety must include human factors interventions to complement any technological improvements. NATA provides such human factors training to the industry on an ongoing basis through our Safety 1<sup>st</sup> Program and other events.

NATA is also supportive of the NTSB decision to include revised pilot work-hour regulations and crew resource management training as part of its most wanted list. The association has participated in drafting comprehensive proposals submitted to the FAA that would address, and even exceed, the recommendations made by the NTSB in these areas. We are hopeful that in both cases, the FAA acts quickly on these recommendations and initiates rulemaking to address these concerns.

#### *Reduce Dangers to Aircraft Flying in Icing Conditions*

The NTSB has recommended that the FAA “use current research on freezing rain and large water droplets to revise the way aircraft are designed and approved for flight in icing conditions.” The Board has also suggested the FAA work with NASA to “identify realistic accumulations and incorporate new information into aircraft certification and pilot training requirements.”

On April 26, 2007, the FAA issued a notice of proposed rulemaking (NPRM), changing requirements for ice protections on newly certificated aircraft. The proposal, a direct response to previous NTSB recommendations, requires the establishment of a system to ensure timely activation of airframe ice protections for all aircraft certificated for flight in “known icing conditions.” Furthermore, the NPRM would require an aircraft to be equipped with a primary ice detection system, typically consisting of two independent detectors, which either automatically activates the icing protection system or provides an indication to the flightcrew when the system must be activated manually. The NPRM would also mandate that newly certificated aircraft be equipped with an advisory ice detection system that would alert the flight crews to certain visual cues consistent with the accumulation of ice during known icing conditions.

NATA is supportive of the NTSB’s recommendation to improve the research and development of aircraft systems to more accurately recognize and respond to icing conditions and is supportive of the FAA’s rulemaking in this regard. However, NATA does remain concerned with efforts to significantly modify existing aircraft systems, particularly in aircraft that have successfully completed millions of safe flight hours with their current certificated systems. Additional icing system requirements, such as those suggested by the NTSB, should remain forward-fitting and should not be required on the existing fleet if changes are ultimately deemed appropriate after proper analyses occur.

It is also important to note that many of the accidents involving icing result from incorrect crewmember actions that may - in some cases - even be contrary to existing FAA regulations. When dealing with human factors in known icing conditions, education and training are the absolute best methods for reducing the dangers caused by icy conditions. While technology improvements will undoubtedly improve the safety of aircraft flying in known icing conditions, the best defense against such accidents begins with proper icing avoidance, and icing detection/protection systems and anti-complacency training.

The proper use of anti- and de-icing procedures on the ground is also critical to safe winter operations. NATA routinely offers to the industry comprehensive seminars to train those responsible for ground anti- and de-icing applications on the proper techniques to ensure ongoing competence.

### *Reduce Runway Incursion/Ground Collisions of Aircraft*

The NTSB has proposed that the FAA require the installation of systems aboard aircraft that would “give immediate warnings of probable collisions/incursions directly to flight crews in the cockpit.” While this recommendation was made following accidents involving large commercial aircraft and commercial service airports, NATA recognizes that ground safety on the airport operating area is the responsibility of employees at all levels of service on an airport.

As the Subcommittee is well aware, the FAA has taken a number of positive steps to improve runway safety, and has made the issue a top safety priority within the agency. The agency has established a runway safety web site, and allows pilots and maintenance technicians to disclose runway incursions with no punitive legal enforcement. By removing such punitive enforcement, the FAA has created an environment where stakeholders can learn from previous incidents and discuss ways to correct many of the root causes of these incursions. The FAA has set a goal of reducing the most serious incursions to .450 per one million operations by fiscal year 2010.

The FAA is also currently testing and implementing a number of runway safety initiatives, including installing Airport Surface Detection Equipment – Model X (ASDE-X) warning systems at 17 major airports, with seven more planned for fiscal year 2007. These systems, currently at various phases of implementation, with 8 fully functional, are a vital component to increasing runway safety, as they provide air traffic controllers with detailed movement on runways and taxiways, even during periods of limited visibility. The FAA is also testing runway status lights (RWSL) at Dallas - Fort Worth International Airport (DFW), which could help reduce instances of inadvertent crossing of airport runways by other aircraft. RWSL essentially act as motion detectors, and blink red when there is movement too close to the light. The system is relatively inexpensive to install (\$1 million per runway) and can work with existing ASDE-X systems. The agency is also working on enhanced marking for airport taxiways and runways which will more clearly identify proper positions for aircraft. The new markings are now standard at airports with 1.5 million or more passenger enplanements and are recommended for implementation at all airports by 2008.

NATA is in agreement with both the NTSB and the FAA regarding the technologies currently in testing and implementation stages to improve aircraft runway safety. It is important to note, however, that such systems are generally geared towards large aircraft operating at larger commercial service airports used by scheduled airlines. NATA concurs that these operators are the correct focus for the proposed technological solutions, but cautions that these improvements are not a panacea to solving all runway incursion incidents. A sustainable reduction in runway incidents must involve not only warnings of an imminent problem, but also include early intervention and analysis of the root cause of these incursions, particularly when such incursions involve ground support equipment. Reducing human errors that lead to these incursions will have a profound impact at all airports, including the smallest general aviation airports.

NATA has undertaken numerous initiatives to prevent runway incursions and ground collisions of aircraft. As part of our Safety 1<sup>st</sup> program and Safety Management System programs, which is described below in greater detail, ground safety is a top priority within our organization. We regularly conduct Professional Line Service Training (PLST) educational courses for ground service employees, which helps promote, establish, and maintain a safe ramp and working environment. The course reduces costly accidents through the use of safe and uniform procedures, and is the only program in our industry that is aircraft-specific. NATA has also, under a grant from the FAA, produced a video on ramp communications directed at flight crews and ground personnel to reduce these kinds of incidents and accidents. Our training is ongoing, as the Safety 1<sup>st</sup> program conducts

monthly online web casts focusing on a variety of safety issues, in addition to a monthly newsletter for ground operators, focusing on runway safety.

### *Improve Audio and Data Recorders/Require Video Recorders*

In recent years, the NTSB has been adamant in their support of increased use of cockpit voice recorders (CVRs) and flight data recorders (FDRs), and the Board has also suggested the use of video recorders in the cockpit to give investigators more information when studying an aircraft accident. The Board has proposed requiring CVRs to retain at least two hours of audio, and requiring backup power sources on CVRs to collect an additional 10 minutes of data should an aircraft's main power fail. The Board has also suggested annual inspection requirements of these devices to ensure their integrity.

Currently, FAA regulations require the use of cockpit voice recorders in multi engine, turbine-powered Part 135 aircraft with six or more seats and certificated for two pilots. Furthermore, any turbine-powered aircraft with 20 or more seats, regardless whether the flight is considered commercial or noncommercial, is required to have a CVR. Part 135 flights (commercial) are required to have 30 minutes of recording, while Part 91 (noncommercial) flights have a 15-minute requirement, both of which are on continuous loops. Additionally, multi-engine turbine-powered Part 135 aircraft with 10 or more seats are required to have a FDR on board.

The FAA has proposed a rule to boost the CVR retention to 2 hours of audio, for both current and future aircraft. The same proposed rule also seeks to require backup power on CVRs only for newly manufactured aircraft. There is currently no rulemaking in progress to require cockpit video recorders.

NATA is supportive of expanded requirements for cockpit voice and data recorders, on the condition that such requirements are forward-fitting and do not apply to existing aircraft. Any new mandate should follow the Part 135 regulations as currently written: multi-engine, turbine-powered with 6 or more seats certificated for two pilots are required to have a CVR, and multi-engine, turbine-powered with 10 or more seats certificated for two pilots are required to be equipped with an FDR. Retrofitting the existing fleet can be an extremely complicated and expensive process, and we believe such a requirement would place an unnecessary and costly burden on the industry. It is also very likely that the FAA technical approval for installations of such equipment would require a Supplemental Type Certificate (STC) on a per-aircraft basis, which would dramatically increase the time and cost burden needed to comply with such a requirement.

NATA also remains very concerned with the concept of cockpit video recorders. There have been some studies evaluating the usefulness of this equipment in airliner aircraft, but here has been no effort to determine the benefit of these devices in the smaller cockpits of general aviation aircraft. Manufacturers of this equipment have stated that multiple cameras would probably be necessary to capture all the viewing angles due to the extremely tight quarters of a general aviation aircraft, significantly raising the costs of acquisition and installation. These evaluation studies have also indicated that the video recorder is most effective when coupled with voice and data recorders that are not required in all aircraft. Ultimately, the interpretation of a video recording, without accompanying voice and data information, is highly subjective and could lead to additional confusion if used as a stand-alone device.

In the area of flight data information collection, I would strongly encourage the NTSB and the FAA to think "outside the box" by considering alternative technologies that are both lower in cost and easier to implement than traditional voice and data recorders. For example, there is a GPS-based

solution that could monitor various flight parameters and provide the NTSB with volumes of data in the event of an accident. Many of today's new general aviation aircraft are equipped with highly advanced avionics, including GPS, primary flight displays and multi-functional flight displays. This equipment could be manufactured to include crash-hardened computer memory chips that would contain information from these electronic sources. It is possible that these chips could be programmed to record many of the same elements captured by flight data recorders, at a significantly reduced cost. Should the FAA ultimately determine that additional regulations requiring data recording devices are necessary, NATA strongly recommends that lower-cost alternative technologies be considered.

### *Reduce Accidents and Incidents Caused by Human Fatigue*

The NTSB has recommended that the FAA revise its current pilot duty and rest requirements, establishing new working hour limits for flight crews and aviation mechanics based on human fatigue research studies, circadian rhythms, and sleep and rest requirements. NATA generally agrees with the NTSB's recommendations and has led an initiative to reform these regulations for flight crewmembers in the on-demand air charter industry.

The current regulations for Part 135 crewmember flight, duty and rest requirements are widely misunderstood, subject to hundreds of interpretations and no longer reflect the operations of today's on-demand air charter industry. NATA has worked for over a decade on various proposals that would modernize these regulations. However, a key obstacle in this effort has been the desire by some, including some within the FAA, to impose a "one size fits all" standard on flight duty and rest requirements. The reality is that different types of operations impose different demands and stresses on pilots and therefore impact the onset of fatigue differently.

NATA served as an active participant on an Aviation Rulemaking Committee (ARC) regarding the Part 135 industry, which considered a number of much-needed reforms to the Part 135 industry. One of the key components of the 135 ARC's work was to draft and submit a proposal that would dramatically revise the flight, duty and rest requirements for Part 135 operators. The proposal addresses all of the major areas of concern voiced by the NTSB. It includes a hard limit on a pilot's duty-day, establishes predictable duty/rest (or wake/sleep) patterns, sets special rules for managing long duration flights that cross multiple time zones, and requires a minimum rest assignment of no less than 10 hours. Currently, commercial airline requirements only require an 8-hour rest limit, and that limit can even be reduced to 6 hours under certain conditions. The regulations endorsed by NATA do not allow a reduction in a pilot rest assignment for any reason. The 135 ARC proposal was a significant undertaking and we strongly urge the FAA to move forward on issuing the recommendation as a proposed rule for public comment. NATA would also be happy to provide an in-depth briefing for the Subcommittee on the specifics of the proposal.

### *Improve Crew Resource Management*

The NTSB has recommended that Part 135 air charter flight crews, excluding those aircraft certified for only one pilot, receive crew resource management (CRM) training. NATA is in complete agreement with this recommendation. Importantly, the Subcommittee should be aware that the overwhelming majority of Part 135 flight crewmembers have already voluntarily implemented CRM training programs. The industry understands the need for CRM and its adoption of CRM programs has far outpaced the FAA's ability to initiate rulemaking in this area. The need for CRM training in Part 135 operations was another issue considered by the 135 ARC, which issued the pilot fatigue recommendations described earlier. The industry recommendation adopted by the ARC and submitted to the FAA actually exceeds the NTSB recommendations. Under the ARC proposal, all

Part 135 flight crewmembers would be required to receive CRM training, including those serving in single-pilot operations.

CRM training provides a pilot with far more than the ability to better communicate and work with other pilots. It equips the pilot with the skills to manage operating a complex aircraft with today's advanced avionics. This is especially important when considering the number of new very light jets, which will be certificated for single-pilot operations, entering the market place over the next few years. NATA applauds the NTSB for making CRM training a most wanted issue, and strongly urges the FAA to act on the recommendations of the 135 ARC in this area.

### **NATA Safety Initiatives and the Safety 1<sup>st</sup> Program**

NATA and our members have made aviation safety a top priority, as you can see from our actions related to the NTSB's top aviation safety concerns. Because of the strong demand within our membership for improved safety training and evaluation, NATA formed the Safety 1<sup>st</sup> ® program in 1999, with a goal of reducing accidents on airport runways and taxiways by 50 percent. Through the program, participating companies receive training for their employees at all levels regarding industry best practices for handling ground support equipment. Over 500 companies participate in our Professional Line Service Training (PLST) program, which produce a wide variety of seminars and written material addressing key safety issues. The objective of the program is to teach ground personnel proper and safe procedures for servicing and refueling, towing and handling of general aviation aircraft and helicopters. Employees are trained to have a professional "safety first" attitude. The program has been an overwhelming success, with more than 8,000 line service technicians of NATA companies attending seminars and participating in safety training.

Building on the success of the Safety 1<sup>st</sup> program, in 2004, NATA embarked on an even stronger approach to aviation safety, through the concept of a Safety Management System (SMS). SMS programs incorporate a top-down approach to safety. Much like a company's cost-accounting system or quality assurance program, a SMS integrates safety training at all levels of an aviation business, from the company's executives to administrative support staff. The Safety Management System provides a complete safety management program specific to a company's operation. The SMS is based on recognized safety standards and is supported by rigorous industry data that will reduce or eliminate accidents and their resultant costs, in terms of lives lost, injuries sustained, insurance claims filed and direct financial losses incurred.

The NATA SMS consists of two basic components: development by the NATA SMS participant of a customized safety program based on industry best practices and procedures, and continual monitoring of risks, through collection and submission of incident and accident data for analysis. Our SMS for ground operations marks the first time in the industry's history that data regarding ground-based incidents can be collected and assessed to determine what standard procedures could be developed that would increase ground safety at all airports.

In 2005, NATA expanded its successful SMS program to include air charter operations. NATA's Safety 1st Management System for Air Operators is a systematic, comprehensive program for the management of safety risks. It integrates flight operations with financial and human resource management for all safety activities related to air charter. The program requires a stringent commitment from its participants to adhere to all guidelines of the program. The NATA SMS for Air Charter defines how operational safety should be managed and how it can be integrated into an organization's business activities. It ensures the safety message is consistent, interesting and always on the forefront of the SMS participant's corporate culture.

Since 2006, with support from an FAA grant, NATA has been able to expand this critical program much faster than originally expected. With the FAA pursuing rulemaking mandating that charter companies adopt a SMS program in the near future, this federal investment is already paying extraordinary dividends far ahead of any potential regulation.

NATA SMS is a data driven, business approach to safety management. In common with all other management systems, NATA SMS provides for goal setting, planning, and performance measurement. It concerns itself with organizational safety, which goes beyond conventional health and safety issues in a working environment.

Program participants receive a comprehensive safety guide, and agree to participate in an independent audit of their operational practices. Participants are also required to engage crews in both regulatory and refresher training designed to increase the flight crew's knowledge and continual learning.

The NATA Safety Management System instills a heightened safety culture throughout each participating company as the business embraces this safety program based on recognized industry standards and supported by rigorous industry data. NATA is working closely with the FAA to ensure that this program meets established guidelines and criteria.

The SMS program complements existing federal regulations, as compliance with federal regulations alone does not always result in the corporate safety culture and quality management goals that many operators wish to achieve. The NATA SMS can assist both air charter operators and ground-based service providers in raising the safety and quality bar that in turn will improve operational safety performance by lowering incident rates and identifying potential risks for accidents. NATA believes that the NATA SMS program will accomplish more to improve the safety of air charter operations and ground service providers than further regulatory burdens that do nothing to foster the necessary "corporate culture" essential to establishing a superior safety standard.

## **Conclusion**

As you can see, NATA remains a strong advocate for increased aviation safety improvements, both through advances in technology as well as increased human awareness training. The recommendations of the NTSB in many ways mirror the efforts our industry is currently making to raise the bar for aviation safety. This Subcommittee's commitment to oversight of aviation safety is also a key component of the aviation safety puzzle, and we welcome any opportunity to discuss with you and your staff industry initiatives to continuously improve an already impeccable aviation safety record.

Thank you once again for the opportunity to testify, and I look forward to answering any questions Subcommittee members may have.