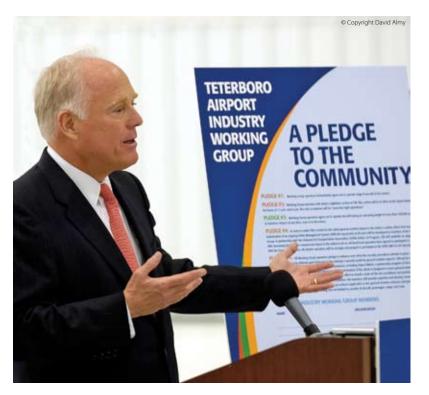# Saving an Airport With Safety

BY JAMES K. COYNE

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James K. Coyne, president of the National Air Transportation Association, presented the safety program to the press and community representatives.

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TETERBORO AIRPORT INDUSTRY WORKING GROUP

A PLEDGE TO THE COMMUNITY

Teterboro Airport (TEB), the primary New Jersey-based general aviation airport serving the New York metropolitan area, has long been a case study in confrontational aviation dynamics. Local politicians, media and citizens groups watch every new development at the airport like a hawk, and when something goes wrong, they're ready to attack.

From day to day, the issue might be aircraft noise, nighttime operations, pollution, traffic congestion, terrorism risks, the threat of unwanted commercial service or just the general not-in-my-backyard opposition that so many urban airports face. Last year, the *casus belli* — the issue at the heart of the conflict — was aviation safety.

A heavily loaded Bombardier Challenger failed to climb after takeoff from Runway 06, crossed a busy highway, struck several cars and careened into a nearby warehouse. Network television cameras were there in minutes; within hours, local politicians were demanding that the airport be closed or, at a minimum, that the number of flights and operations be limited. Their message was simple: If there are fewer flights at Teterboro, there will be fewer accidents — and no flights would be even better!

The airport's safety record over the past decade or so is, in fact, quite good. The Port Authority of New York and New Jersey, the airport operator, spares no expense in keeping facilities up to date, and since most users of Teterboro are corporate and commercial operators whose aircraft are professionally flown, the equipment and crews are typically first-rate. Still, the airport's opponents had a point: The status quo wasn't good enough.

By late 2005, the Teterboro Airport Industry Working Group was formed with the help of the Port Authority and several national aviation associations to seek a community-wide solution to the challenges the airport faced. The goal, simply put, was that Teterboro should be the safest general aviation airport in the nation — a tough

goal for any airport, let alone one as complex as Teterboro.

In October 2006, airport and Port Authority officials, local politicians and representatives of the four major general aviation associations joined aircraft operators to present formal pledges to improve operations and enhance safety. No general aviation airport in the United States has ever taken such a step; time will tell if such a collaborative safety program is a model for other airports. There's no doubt, however, that a successful airport-based safety program is an essential part of Teterboro's future.

From this point on, it was declared, managing safety shall be a fundamental business goal for every business operator at Teterboro. Like any management goal, success will only come if there is commitment. Thus, the new Teterboro Safety Initiative began with the most basic demonstration of commitment that the participants can make: A promise.

Having said that, the content of the promise needed to be settled.

The participants concluded that the essential element required to improve safety was the creation of safety management systems (SMS) that all operators, including the airport itself, would implement. The airline community has long relied on such systems, and today, virtually all airlines consider them essential. But the question remained whether the hundreds of aviation businesses that want access to Teterboro could make the same kind of commitment. For big operators, like NetJets, this might not be difficult; but would smaller operators have the resources to support such a change? Anything less, it was decided, would have little effect. The group decided that a Teterboro-wide SMS was the solution.

"Raising the bar on safety" is not simple, nor is it easy. Convincing the Teterboro-based operators and other major users to "make the

A successful airport-based safety program is an essential part of Teterboro's future.

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pledge" was pretty straightforward: They're easy to contact, understand the importance of the mission, and generally have both the resources to support the program and an incentive to do so. But if improvements in safety truly are to be achieved, then hundreds of other transient and occasional users of the airport will have to make the same kind of commitment. To reach them, a broader strategy was needed.

The solution was to get the working group's major members to contact more than 95 percent of Teterboro operators and persuade them to voluntarily implement an SMS that would reduce the risk of operational errors on flights to or from Teterboro. Operators who are unwilling to make this kind of commitment will be most helpful if they just stay away.

But steps such as these inevitably raise new questions: Can such a transformation in the way numerous private and commercial operators manage safety be achieved without federal regulations forcing their hand? Would independent aviation businesses voluntarily make costly investments in safety in a real-world marketplace where competitors are less willing to meet higher standards? Can a public airport insist on superior safety procedures and still meet the "equal access" provisions of federal grant assurances? Most fundamentally, can one airport, with its unique political and operational issues, craft its own program within its community of users to improve safety and ensure its survival?

The Teterboro Safety Initiative assumed that the answer to these questions is "yes" and developed a very different framework for aviation safety advancement at a public airport, an airport that faces organized opposition to its very existence. Now, the challenge is to produce specific safety recommendations that significantly reduce the

risk of operational errors and provide meaningful mitigation of traditional airport hazards.

Adverse operational outcomes can occur in any area of activity subject to human error, on the ground or in the air. Reducing the risk of human error primarily depends on training, technological support, oversight, programmed redundancies and systemic management of human factors. The Teterboro Safety Initiative seeks to promote procedures, within company-based SMSs, that address each of these areas. Fixed base operators, charter operators and flight departments based at Teterboro have enrolled in SMS programs developed by the National Air Transportation Association (NATA) and others that recommend specific operational improvements in each of these areas. Airport officials are committed to similar reforms of their own safety management programs.

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The Challenger's failed takeoff last year was caused by a center of gravity far forward of limits, the National Transportation Safety Board said.

Employee training is perhaps the cornerstone of effective SMS implementation, with one significant difference from more typical training regimes: everyone gets trained — from veteran CEO to the entry-level apprentice — and the training never stops. Training at the airport itself is one thing, but training thousands of pilots at companies around the country who might fly to Teterboro only occasionally is a much tougher challenge. With the support and guidance of the U.S. Federal Aviation Administration (FAA), NATA is developing an online training program to bring Teterboro-specific operational issues to the attention of pilots thousands of miles away. Many charter and fractional jet operators already consider such repetitive training programs the best way to address a fundamental human factors challenge: complacency.

Physical improvements in the airport environment are another element of the Teterboro Safety Initiative. The Working Group has identified more than a dozen important safety projects for the Port Authority and FAA to consider, ranging from better ramp lighting to an engineered material arresting system (EMAS) that soon will be installed at the end of Runway 06.

Finally, the Working Group emphasized that improved navigational and surveillance technologies, along with advanced flight management systems, can enhance safety at Teterboro by enabling more-stabilized approaches and eliminating circle-to-land procedures necessitated by long-standing air traffic management practice in the New York region. Many Teterboro users already have the onboard equipment necessary to support advanced required navigation performance (RNP) approaches, and the Port Authority and others have pledged to promote timely implementation of the new procedures.

The group's broadest priority, however, is to accept responsibility for a progressive safety agenda and not wait for regulators or others to direct how or when the users can do better. That means establishing a permanent safety improvement program at Teterboro that brings the most experienced users of the airport together on a regular basis to plan and promote new solutions to age-old problems of aviation safety. Today it may be EMAS or online training programs, tomorrow it could be human-computer cross-challenging interactive checklists or refuse-to-crash navigational systems, but only with a consistently managed and dynamic airport-based SMS can ambitious safety goals like those at Teterboro become a reality.

In the final analysis, safety is as important to airports as it is to pilots and passengers. Only by constantly improving safety can an airport like Teterboro, where good enough is never good enough, fulfill the expectations of political leaders and promise the public that it will be there when it's needed, today and for years to come. ●

U.S. National Transportation Safety Board