AirTAP Briefings

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Airport security about more than preventing terrorism

For the last decade, security has been a high priority for airports of all sizes. And recently, the Department of Homeland Security (DHS) implemented its National Terrorism Advisory System, which replaces the former color-coded alert system. To provide current information to managers of Minnesota's general aviation (GA) airports, AirTAP and the DHS sponsored an airport security workshop in March. This workshop, the first in a series of four developed by the DHS for both GA airports and first responders, was attended by 19 airport managers, consultants, and agency staff.

Bill Micklaus, who has worked in law enforcement his entire career and regularly teaches security courses for the Transportation Security Administration, led the workshop. He emphasized that security at airports isn't just about preventing terrorism: it encompasses a wide range of concerns such as theft, vandalism, personal burglary, and other types of suspicious activities. The course aimed to give attendees the information they need to

- Recognize how GA aircraft and facilities could be used for criminal purposes.
- Apply crime prevention through environmental design (CPTED) basics.
- Establish an airport watch program.
- Establish a plan to use and maintain an aircraft key-control system.
- Create a plan to orient law enforcement responders on the basics of airport and aircraft operations.
- Create a basic airport security plan for all airport personnel.

Recognize how aircraft and facilities could be used for criminal purposes

Micklaus used the "Barefoot Bandit" to illustrate the vulnerability of GA airports

and aircraft. The bandit, 19-year-old Colton Harris-Moore, stole five small aircraft over a yearlong crime spree that ended when he was captured in the Bahamas in 2010. Micklaus asked participants to consider why Harris-Moore was so successful and how they could improve security to prevent a similar crime from occurring at their own airports.

Airports shouldn't be apologetic about security operations such as inspecting luggage. Instead, Micklaus suggested airport staff offer security requirements as a way to serve clients rather than inconvenience them. "Let me bring your luggage to you" sounds more like customer service than a security measure, he said.

In the United States, 92 percent of all airports (about 20,000) are GA airports, and more than 65 percent of all hours flown are by pilots in small aircraft. Thus, general aviation constitutes a significant share of aviation activity. "Consider not *if* a security event will happen, but *when* a security event will happen. And…develop a culture of safety in response," Micklaus said.

Security should be customized for preventing a specific situation. The six critical areas for security threat prevention are:

- Intelligence and warning
- Border and transportation security
- Domestic counterterrorism
- Critical infrastructure and key asset

Security *continued on back*

Save the date: AirTAP 2011 Fall Forum

Mark October 6 and 7 on your calendar for this year's AirTap Fall Forum at Breezy Point Conference Center.

The annual Fall Forum is AirTAP's primary training event for personnel who operate, maintain, and administer airports, aviation policymakers, and airport consultants. Topics this year will include:

- Emergency plan development
- Snow removal and storage
- Building maintenance
- Uses and issues for sustainability in airport operations
- Wildlife control
- Airports 101—Breakfast for new managers
- Minnesota State Aviation System Plan

Registration and accommodation details will be included in the forum brochure, to be mailed in August. Or visit the AirTAP Web site at www.airtap.umn.edu for more information.

The forum is sponsored by Minnesota AirTAP, the Mn/DOT Office of Aeronautics, and the Federal Aviation Administration in cooperation with the Minnesota Council of Airports.

An airport's story: Flying Cloud

Flying Cloud Airport, located in Eden Prairie, Minnesota, is one of six relievers owned and operated by the Metropolitan Airports Commission (MAC)—and one of the busiest airports in the reliever system. Flying Cloud has a strong reputation for serving the needs of busy corporate executives and their flight crews; most of its business comes from corporate business jets and turbo-props.

In 2010, Flying Cloud Airport recorded more than 90,000 takeoffs and landings, down from previous years, when it has averaged well over 100,000 operations annually. The decrease may reflect the change in corporate air traffic resulting from a weaker economy.

Flying Cloud uses an FAA-operated control tower and an instrument landing system. A precision instrument approach is available to Runway 10R, and non-precision instrument approaches to runways 10R, 28L, 28R, and 36. The airport also has a published precision instrument approach procedure for helicopters. Several full-service operators offer corporate aircraft services, recreational flight training, and aircraft charter, rental, sales, and maintenance.

Airport manager Jeff Nawrocki says Flying Cloud's most valuable asset is the multitude of resources it offers—not only traditional services but also on-demand charter flights, traffic and news reporting, corporate and business services, flight clubs, Civil Air Patrol, and agricultural airport services.

Flying Cloud was established in 1941 when the United States Navy was training pilots for World War II. The Navy arranged with a local farmer, Martin "Pappy" Grill, to use a grass landing strip for pilots flying from Wold-Chamberlain Airport (now MSP International) to practice approaches. After the war, Grill sold the field and some adjoining land. It was named "Flying Cloud Airport" to reflect both local American Indian lore and flying.

The MAC bought the airport in 1948 and paved the runway that same year. In 1963, it built a control tower and by 1966, Flying Cloud was ranked the second-busiest airport in the central United States, behind Chicago-O'Hare. In 1968, with 446,198 takeoffs and

Flying Cloud *continued on back*

Security *from front*

protection
- Defense against catastrophic threats
- Emergency preparedness and response

Apply crime prevention through environmental design basics
Crime prevention through environmental design (CPTED) incorporates security into design using cost-effective methods that increase security plans and procedures while maintaining aesthetics. The four strategies for CPTED are:

1. Use of natural surveillance. Keep intruders visible, use lighting, minimize hiding spots, and allow everyone to see important areas of the airport.
2. Use of territorial reinforcement. Create a sphere of influence for security personnel, define property lines, and clearly delineate public versus private space.
3. Use of natural access control. Use clearly marked routes to specific locations and channel public traffic effectively.
4. Use of target hardening, done with physical features such as gates, fences, locks, and other barriers.

Micklaus gave several examples of CPTED, such as strategically placing fences to guide visitors in the desired direction, and using signage to both welcome visitors to the airport and provide warnings for controlling sensitive spaces.

Establish an Airport Watch Program
The Aircraft Owners and Pilots Association (AOPA) has developed an easy-to-implement Airport Watch Program; information is available at www.aopa.org/airportwatch. The program describes how to establish a "Lock Up and Look Out" environment and recommends building relationships with local responders by giving tours of the airport and asking them to help identify less-obvious hazards.

Establish a key-control system
Key-control procedures, to be included in a written security plan, should be developed and enforced for all airports as a method for controlling access to aircraft and buildings. Procedures for controlling locks, either with keys or combinations, can be included in the same plan.

As a general rule, keys should be stored behind two layers of protection, Micklaus said. For example, when an airport is closed, store keys in a key box within a closed and locked room. During normal operating hours, store keys in a key box, with a designated staff person responsible for issuing and collecting keys.

> Want police presence at your airport? Offer local law enforcement unused hangar space as a police substation.

Orient law enforcement responders
The airport manager should be proactive in building relationships with local police, first responders, and emergency personnel, considering ways to multiply existing forces and extend their range. Other issues to consider are ways in which all airport employees can be security patrol members, and how to enlist help from airport users and tenants by making them aware of the security plan. The airport manager should advise stakeholders on airport security issues and collaborate with available resources—law enforcement, fire, and environmental experts; aviation experts from fixed-base operators; aircraft owners; and flying clubs, among others.

Create an airport security plan
Each workshop participant was given a blank copy of a Security Recommendations document during the class. [A copy is available for download at www.airtap.umn.edu/Publications.] Working through this template with airport users, tenants, adjacent property owners, or local law enforcement is the first step for airport managers in developing a security plan, Micklaus said.

Flying Cloud *from front*

landings, it was the ninth-busiest airport in the United States.

Flying Cloud went through a major security change in 2005 to both address security at the airport and manage runway incursions. The most significant security improvements have been installation of an airport perimeter fence and the addition of a card access system with motorized gates.

Flying Cloud has focused on airport infrastructure over the last five years, Nawrocki noted. Several recent projects allow for continued safe operations at the airport while meeting its forecasted needs, including:

- North parallel runway (10L-28R) extended to 3,900 feet in 2008
- South parallel runway (10R-28L) extended to 5,000 feet and widened to 100 feet in 2009
- VOR facility relocated across Flying Cloud Drive in 2009
- Runway 10R glide slope and MALSR systems relocated with runway extension in 2009
- Construction of a south building area, associated taxiways, and vehicle driveways in 2009
- Construction of west and east perimeter roads in 2009

The most pressing needs for Flying Cloud Airport are a possible shift and extension of Runway 18-36 to accommodate obstructions and construction of a north perimeter road around the same runway to reduce the number of runway crossings by vehicles. The airport and the FAA may move the tower to a new location in the south building area and are also considering developing adjacent land for generating revenue. In addition, completion of the south building area utilities would allow for more corporate hangars.

A video highlighting Flying Cloud's features can be viewed online at www.youtube.com/watch?v=hso8OqKU4OE.

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