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75 Years of State/Airport Partnership In 2018

by *Cassandra Isackson*

Director, Minnesota DOT Office of Aeronautics

We are happy to share the fact that 2018 marks the beginning of our 75th year of partnerships with Minnesota's great publicly owned airports! We have 135 quality, public-use airports that serve the Minnesota aviation community and their local communities in a very positive way.



Cassandra Isackson

Through this partnership with the airports, we work together to help assure we have a group of safe and well-maintained airports. This happens by meeting with airport boards, commissions, managers, and the airport city leaders in "Airport Needs" meetings. It is one way we find out directly about an airport's needs, preferences, and plans for the near and distant future.

We also garner input from them for use in building and improving the State Aviation System Plan (SASP). The SASP provides us with a vision for the future of Minnesota's airports. It outlines what Minnesotans desire from the state's transportation system and identifies key guiding principles

that MnDOT Aeronautics strives to achieve. One of the primary objectives of the SASP is to provide the State of Minnesota with planning tools that will assist in making well informed decisions.

While safety at our airports is always a primary goal, our partnerships also work together to reach out to the aviation community and the communities in general. We do this by sharing exhibit space at EAA AirVenture Oshkosh and other area aviation venues. We further these efforts by urging our airports to participate as active members with Minnesota aviation organizations like the Minnesota Council of Airports (MCOA). There, for instance, airport managers can provide "grassroots" information about what is happening in their cities and at their airports that may have an impact on aviation or how that airport operates.

This is just a very brief sample of the ways we have worked – and continue to work – as partners with our airports. We look forward to the continuation and growth of these partnerships, for the benefit not only for aviation in Minnesota, but also for the benefits aviation brings to the communities and surrounding areas around our public airports. It is a win-win relationship, and we expect 2018 to be another great year for aviation. □

Airport Security Without TSA

by *Rick Braunig*

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If you do a search on airport security, you can learn all about what you can bring with you on a Delta flight, but it is hard to find information on security for airports without passenger service. With the Super Bowl coming to Minnesota, there will be additional security measures at the reliever airports making them more secure and pushing any threat out to the



Rick Braunig

next ring of airports.

It has been a long time since we talked about security at general aviation (GA) airports. After 9/11, there was discussion of the TSA implementing security measures at GA airports. Thankfully folks were smart enough to realize that there wasn't a one size fits all process for GA airports, and over time the concern about GA security has faded, but the risk remains. Recently (July 2017), the TSA released a new report on security measures for general aviation airports. This is a great report that the aviation community should heed.

The two biggest threats related to smaller GA airports are the risk of bringing in contraband to make some sort of device, and the risk of launching a vehicle with a bomb inside it from a GA airport. Sure, a C172 or an SR22 isn't going to do the damage of a Boeing 747 crashing into a building, but a C172 loaded with explosives can do a lot of damage. Even

if an aircraft is not part of the attack, if an airport is identified as the place where the device was brought into the country and assembled, that association will give airports a black eye. The TSA report helps us to identify the things we should be looking for and the things we can do now.

The ideal small airport will have regular activity and an operator that keeps track of the comings and goings. Everyone on the airport would know everyone else and something out of the ordinary would be quickly spotted and reported. Unfortunately, this is not the case at all Minnesota airports, and activity normally decreases in the winter making some airports very lonely places. So just like in flight planning, we need to recognize the risks and look for ways to mitigate them.

Recognizing the risk is best done through formation of a plan. We have been talking with airports about emergency plans and a security plan has a lot in common with an emergency plan. The security plan identifies the risks, the steps the airport community can take to mitigate those risks, and the steps to take to respond to a perceived threat.

The TSA identifies eight signs of terrorism, which I would translate to be the things that should make you take notice. For the airport community, the signs we should pay attention to involve people, aircraft and facilities. I like showing up at an airport to find a group of guys sitting around a table drinking coffee. I really like it when they engage me about who I am and what I'm doing there. It's good hospitality (most often) and it is good security. At other airports, there is someone offering services that will meet me at the aircraft, but there are also some places I go that I don't see anyone during my visit which sometimes lasts a couple of hours. If it appears that no one is taking notice of the comings and goings, that is a vulnerability; a risk that needs to be managed.

Some airport managers use FlightAware to see when an aircraft has filed a flight plan to their airport and then they are at the airport to meet the aircraft. The hospitality is usually appreciated. Sometimes people in town will hear or see an aircraft arrive. Whether it is the airport manager or local law enforcement or just another pilot, having someone go to the airport to meet an arriving aircraft improves the security of your airport.

Another mitigating activity is the airport self-inspection. We recommend the airport self-inspection as a way to ensure your NOTAMs stay current, but it is also a tool in airport security. Regular self-inspections help an airport community

to know what the regular activity is, on the airport. If one or more aircraft show up on the ramp that aren't normally there, that is something worth checking out. If there is activity in a hangar that is normally quiet, that is something worth checking out. The self-inspection doesn't always have to be performed by the airport manager. We recommend using pilots and local law enforcement, sometimes even neighbors that like to walk at the airport. The important thing is to know what is normal, what isn't and what to do if something seems abnormal.

The airport security plan should list the actions to be taken when something seems different. Like the emergency plan, calling 911 will work about 90% of the time. So far no one has called law enforcement to come talk with me when I'm walking an airport. I guess I don't look too scary. Still there is a risk in confronting others. The people that are helping to keep your airport safe need to have a process to keep them safe. Reporting before further investigation is a good practice. Documenting and reporting even the abnormal things that seem to be explainable is a good practice. How do you go about that and who do you report things to outside of your local community? These should all be covered in the airport security plan.

The TSA report provides contacts to report information to the TSA through the GA-SECURE hotline. A report can be filed by calling **GA-SECURE (1-866-427-3287)** 24 hours a day. The information they are looking for is the what, where, who, why and when of what you are reporting. What made it seem suspicious, what airport was this at and what aircraft (N-number) was involved. Can you describe the people involved? Why is this unusual and when did it happen? You may want to have a form in your security plan that helps people to record this data. You should also identify the right person in the community to receive this information. A local reaction is always quicker than the response from others.

We may have gotten by on our luck so far, but we have seen that the terrorists are not giving up. As security tightens around one target, they move to an easier, less protected way to reach their goal. We should make our GA airports more secure and we can do that by working together as an aviation community. Pilots, business owners and airport managers need to come together to create a security plan for the airport. Set a goal to have your plan in place by the end of the month. Make it your New Year's resolution. If you see something, say something! □

Innovation For Aviation Safety

by Dan McDowell

Public Affairs, Minnesota DOT Office of Aeronautics

We often hear the word "innovation" in relation to aviation, but have you heard of "innovation for an application?" Quite simply, it is thinking of

ways to improve safety and efficiency for a specific use, while incorporating the latest technologies. And I wanted to gather and share information on something that improves aviation safety in Minnesota, of course, but something that hopefully has a much broader potential application.

So, I contacted Dave Brand, a 27-year FAA employee with service as an Airway Transportation Systems Specialist (ATSS), located out of the Southeastern Systems Support Center



Dave Brand of the FAA Southeastern Systems Support Center with the Mobile Service Unit (MSU) he built to maintain Runway Status Light (RWSL) Systems. The MSU earned Brand the 2016 National Designated Agency Safety & Health Official Safety Champion Award.



The Mobile Service Unit is used late at night when air traffic volume is low.

(SESSC) in St. Paul, Minnesota. His career has continuously revolved around innovation, always analyzing system performance and initiating improvements to achieve a safer and more efficient airway system.

Brand had heard that Minneapolis-St. Paul International Airport (MSP) technicians were going to have to maintain over 300 in-pavement lights on a Runway Status Light (RWSL) System. Hearing that while remembering the tasks from the past (maintaining threshold flush mount fixtures at MSP), he developed an idea on how to maintain a very large number of flush mounts in a safe and efficient manner. He explained, "Work (on the Runway Status Lights) has to be accomplished at night with very little light, in sometimes very tough conditions, while it's raining or snowing, hot, dry, or blowing, and technicians have a 4-hour window of opportunity to accomplish the tasks." If you aren't sure what Runway Status Lights are, quite simply, they are a part of a fully automatic advisory system designed to reduce the number and severity of runway incursions, and prevent runway accidents while not interfering with airport operations.

Brand continued: "I put together a rough draft of a 6' x 10' structure on wheels, added some features like a remote controlled hydraulic lift assembly, propane heating system and a power inverter unit with a battery, and a 7000-watt generator mounted on the back. We added a wireless night vision camera system and installed a high output LED light system, and *voilà!* Introducing the Mobile Service Unit (MSU)." Brand added that the MSU has a communications radio mounted inside for continuous contact with the Air Traffic Control Tower (ATCT), while working in the Runway Safety Area (RSA).

Brand consulted with a fish house construction contractor to get a rough estimate of what a unit with all the added features would cost, and presented that information to management. He received a favorable reaction and was

authorized to proceed with the development of the MSU. He then started building the scope of work for procurement and only one contractor (Berkon) responded. "They modified their trailer design to accommodate the 2' x 2'6" opening in the floor with the capability to lower the framework to within 5 inches of the runway surface," said Brand. He added, "Without them collaborating with us, none of this would have happened."

The unit is a unique safety orientated design incorporating personnel accommodating features that promotes employee safety and enhances quality of workmanship. One unusual feature is a 20-gallon vacuum/pump system that is designed to efficiently remove water from a light fixture and pumping it out by means of an attached hose. Another feature is the built-in hoist assist. When a fixture cover is frozen or stuck in place, a ceiling hoist located above the access area, can assist with its removal. Also located near the opening on the floor is a one-inch thick rubber fatigue mat that reduces the strain on workers' knees and their lower back, while working in the access area.

Brand said "...several northern tier airports have shown great interest in acquiring one of these units, but the budget restraints have dampened their quest lately. In New York, La Guardia and John F. Kennedy airports each purchased a unit last year with a couple new features, like a larger size 6' x 12' with a rooftop AC/heater unit. With this feature and the connection of the 20-ft power cable to a commercial power outlet, the unit becomes a warm comfortable repair shop with all the parts and tools at hand, while recharging the battery system as the unit sits idle."

The MSU was featured in the FAA's fall safety stand-down in 2014. Brand proudly explained that "the program is designed to promote safety in the workplace, a time to reflect and convey safety issues and coordinate any concerns within the work group management area."

One final note on the MSU: Dave's innovative design won the National Designated Agency Safety and Health Official (DASHO) Safety Champion Award in 2016, which is given to an official for exemplifying best practices to improve performance and create a safe and healthy work environment. The award further recognized Dave Brand for going the "extra mile" in an effort to not only make the repair and replacement of RWSLs a faster, more efficient and cost-effective process, but also for designing a unit that improves the operational environment, while increasing the safety for the field technicians.

By the way, technicians at MSP also use the MSU to repair the standard runway edge lights by pulling alongside a light needing repair. The MSU then becomes a rolling, full-service repair shop containing the tools and parts the technicians

need to quickly complete the repairs.

That brings us to what this has to do with General Aviation. Well, when you are completing your *Fly Minnesota* Passport program and you fly into MSP, (or if you travel out of MSP on a commercial airliner), you will most certainly see the runway status lights. Maybe you'll see the bright blue MSU along an intersecting runway and you'll understand what it is and how it contributes to aviation safety. Who knows? Someday you might see an MSU at your local airport with technicians working quickly to repair or replace runway lights to help assure that your GA airport's runway lights are ready when you need them.

*Special thanks to David Brand, MSP ATSS, and the fine folks of the FAA Great Lakes Region for their assistance in producing this article. □

Quotes & Quips From The Right Seat

by Woody Minar

No matter what kind of pilot you are, "communications" is key to getting things right and receiving the right answer to a question that's been asked. As a Designated Pilot Examiner (DPE), I've learned that sometimes the applicant and I just aren't on the same page. But over time, I've learned that a question needs to be correctly worded to yield the answer I want. Here are some examples.

When testing the pilot's knowledge on when supplemental oxygen is needed, I used to ask, "When is oxygen required?" The answer I got was, "All the time." Yup, the applicant answered the question that was asked. A follow-up question



Woody Minar

was asking what the service ceiling was, which is usually above 14,000 feet. I would then ask, "Could we stay up there all day until we ran out of gas?" "No, we need a 30-minute reserve so we would have to come down."

Another question I would ask was, "What's the difference between Vx and Vy?" Expecting to get an explanation of each, I got, "Eight knots." Once again, you get what you ask for.

I have given this scenario: "You've got a passenger who starts to hyperventilate. What can you do to help alleviate that problem?" The usual answer is, among other things, "Breathe into a bag." To help settle the applicant's nerves, I'll then ask, "Paper or plastic?" One reply was, "Do I like the person?"

When their hands are shaking, I try to relax the applicant as much as possible by telling them related stories or humorous anecdotes. But, when they are wearing a short sleeve shirt in the plane when it's 15 degrees outside and they turn down the heat, you know they are really nervous.

Sometimes they share their humor with me, such as the time I took the controls and said, "I have the controls." The applicant obligingly said, "You have the controls," and I responded, "I have the controls." Well, this then got the response, "You have the controls." "I have the controls." "You have the controls." "Yes. I do have the controls."

As a Certified Flight Instructor (CFI), I feel it is important to teach our students the right stuff.

One student of mine early in my teaching career used to take 20-25 minutes to do a preflight on a 172. I soon learned that I had to book the plane for at least a half hour longer than normal. I certainly didn't want to rush him. There were some screws missing on the cowling and other places, and each time he did a preflight, there seemed to be another screw missing. He once asked me, "How many screws have to be



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