

AIR TAP Briefings

A publication of the Airport Technical Assistance Program of the Center for Transportation Studies at the University of Minnesota

Winter 2011

Special Fall Forum Issue: This issue of AirTAP *Briefings* features extended coverage of the 2010 AirTAP Fall Forum, held in October 2010. Look for information soon, including date and location, for the 2011 Fall Forum.

Annual forum focuses on maximizing lean resources

More than 60 attendees from general aviation airports and community government across Minnesota met in Alexandria, Minnesota, for the seventh annual Airport Technical Assistance Program



Kurt Claussen

(AirTAP) Fall Forum, held October 7 and 8.

Jim Grothaus, AirTAP director; Kurt Claussen, assistant airport manager for Rochester International Airport and current president of the Minnesota Council of Airports; and Christopher Roy, director of the Minnesota Department of Transportation (Mn/DOT) Office of Aeronautics, gave opening remarks.

Roy told those gathered that the Office of Aeronautics has been focusing on



Christopher Roy

updating its statewide system plan, which was last done about five years ago. It is also working to make air service as attractive as possible for those airlines currently serving small airports in order to maintain, and perhaps increase, service in Minnesota. Finally, the office is considering how best to educate the public about what general aviation is and what benefits it brings to a community.

Following Roy, Claussen commended the theme of this year's conference of maximizing resources and saving money and encouraged attendees to think of themselves and their colleagues as valuable resources.

2010 Fall Forum sessions

The following sessions were held over the two-day event:

- Maintaining High Standards in Tough Economic Times
- Jet Blast Session: Media Relations
- An Airport's Evolution—The Story of the Alexandria and Albert Lea Airports
- Jet Blast Session: Airport Grant Update
- Is an Air Show in Your Future? Finding Ways to Bring Money and People to Your Airport
- Conversation with Jeff Hamiel
- SWPPP Implementation—What's Ahead for the Next Five Years?
- Partnering Strategies—Using Your Airport Colleagues to Better Run Your Airport
- Walking Technical Tours of Alexandria Municipal Airport

Speakers discuss how to get the best from staff

Staff behavior in an organization can either support or undermine the organization's goals. That's why it's critical to deal with performance issues promptly and effectively, said speaker Dave Allison



Dave and Steve Allison

during the forum's opening session. He and Steve Allison, with the Duluth-based consulting firm Allison and Associates, explained how high standards build organizational pride and offered advice for safeguarding it.

Every organization has standards for how it operates, Allison said, whether or not these standards are published or explicitly communicated. Standards are determined by your customers and how your organization meets customer expectations. For an airport, customers are those people who use the airport as well as vendors, suppliers, and service providers—anyone who's not part of regular operations but who has contact with the airport.

When staff performance slips, standards decline. "And when you as a manager procrastinate [in addressing] problem behavior, then the weakest people in the organization set the standards by default," he said.

Confronting staff is a difficult but necessary task for managers, Allison continued. If bad behavior is ignored, it will automatically erode morale, standards, and

productivity. Further, if you allow the situation to continue, he said, your organization will lose its best staff.

Managers avoid confronting such behavior for a number of reasons: they don't want to hurt

feelings, or they want staff to like them. "But if I go for liking, I become very inconsistent and sporadic," Allison said. Leadership is about being "consistent, honest, fair, and in control." Confronting is also stressful, and it's an interruption to the workday. Finally, managers may not know how to do it. As a result, they tend to put up with substandard behavior until they're upset by it, Allison said.

To help managers deal with performance issues early, the speakers described a five-step process that "works like magic if you are in control of your emotions," they said. The first step is to tell the employee what behavior is bothering you. It must be a specific behavior—something you can see or hear, Allison said. Next, tell the employee how you feel and why you feel this way. In step three, help the employee recognize how the behavior is affecting the customer.

The first three steps should take no more than 60 seconds. Then move on to step four, where you ask the employee how she or he feels about it. Give the other person a chance to tell his or her side of

the story, Steve Allison said. About 90 percent of the time people will respond positively. "When you don't attack them with your emotions, but instead give them logical information, they understand," he said. If you get a positive response, move on to the fifth step. If you get a negative response, you can say that you understand how she or he feels—but not that you agree. You can explain that he or she may not think the behavior is critical, but you and your customers do, Dave Allison continued. "If [the employee] suggests quitting, do not talk them out of it...It's bad news, but good information," he said. Finally, in the last step, ask the employee what he or she can do about the behavior. When this process is done correctly, he said, "You will never have to terminate an employee again," because the employee will either chose to change his or her behavior or leave.

The best time to have these conversations is at the end of day, and it should be done privately (as opposed to complimenting, which should be done publicly), Allison added.

Besides the supervisor-employee relationship, for teamwork to be truly effective, individuals need to have the skills to confront each other if things aren't working in an organization, he continued. "The ability to confront logically in a timely way is probably the most valuable skill you can bring to the marketplace."

SWPPP implementation: What's ahead for the next five years?

In Minnesota, every airport applying for coverage under the National Pollutant Discharge Elimination System (NPDES) General Stormwater Permit was



Mike Harder

required to submit an application in 2010. This session identified the required elements of the next phase: implementation. The Minnesota Pollution Control Agency (MPCA) is responsible for implementing the state's NPDES program. Mike Harder with the Metropolitan Airports Commission described the steps required for each airport to comply with this implementation.

Year 1 of permit coverage (August 2010–July 2011 for most airports) of the implementation phase requires airports to prepare for sampling and testing stormwater runoff. Airports should review what is included in their Stormwater Pollution Prevention Plan (SWPPP) and note the best management practices (BMPs) they said they would use. Those BMPs should be implemented or installed in the first year and maintained as required. Airports should optimize the conditions under which samples will be collected in Year 2 by cleaning up metal scrap piles, covering stockpiles, and conducting training on best practices for spill prevention at fueling stations. The permit requires annual staff training on BMPs and SWPPP procedures as well as documentation of those training efforts.

Airports should also ensure that all tenants conducting industrial operations are meeting their own SWPPP requirements, Harder noted. Industrial operations include fuel storage and handling, deicing or anti-icing operations, outdoor storage, aircraft washing, and service of aircraft and ground vehicles. Industrial materials include fuels, lubricants, machinery, raw materials, waste and scrap metals, and waste byproducts.

At this time, airports can check if they are in compliance by visiting the MPCA website (www.pca.state.mn.us) and locating current permits by clicking on the picture labeled “Find environmental information about your

neighborhood.” Alternatively, airports can be searched by site name.

During the first year following permit approval, airports must:

- Post the permit coverage card.
- Conduct monthly inspections (twice monthly during deicing season).
- Perform required inspections twice annually during a runoff event.
- Train airport staff.
- Review and update their SWPPP.
- Document activities relating to the SWPPP.
- Submit their SWPPA annual report to the MPCA in March 2011.

Finally, during Year 1, airport managers should consider which laboratories to send runoff test samples to in Year 2. Harder recommended they conduct trial runs for sampling to ensure that enough runoff can be collected. Airport managers should also develop a tracking system that will record the dates, samples taken, corrective action, and any other documentation.

In Year 2, airports must sample their runoff once per quarter and submit the sample results to the MPCA. If the annual average result fails to meet the specified benchmark levels, additional modifications and testing will be required. Since this could prove expensive and time consuming, Harder encouraged airports to follow their SWPPPs and monitor stormwater runoff quality early.

Harder noted that airports within one mile of bodies of water classified by the MPCA as “impaired” or “special” have additional requirements.

During Years 3 through 5, airports should follow the same procedures as for Year 1, as long as the sampling results for Year 2 are below the benchmark levels. Otherwise, modifications to an airport's SWPPP during Year 3 and additional sampling during Year 4 (and possibly Year 5) are required. If an impaired water is added to an airport's area, samples must be collected during the year the impaired water is added. Harder also covered ways to obtain a “no-exposure” exclusion, details of which are included on the MPCA website.

Training key to safe partnering practices

In a session on partnering strategies, speakers gave suggestions for safely sharing local resources such as city staff and equipment and for using volunteers to save money.

Safe operations are an airport's primary responsibility regardless of budget constraints, said Alberto Rodriguez, FAA airport certification safety inspector. One way to help ensure safety is through training. Each airport should develop a training curriculum that includes, at a minimum, basic guidance for staff or volunteers on how to operate in an airport environment—especially for those who are new to such an environment.

Andy Peek, FAA program manager, said airport managers may want to keep a list of staff who have been trained for certain tasks so they can quickly find someone to call when a specific need arises. He also suggested that managers put placards listing key information in all equipment that goes out on the airport and to conduct “ridealongs” for new staff and seasonal workers.

Using volunteers for certain tasks has worked well at South St. Paul Municipal Airport, said airport manager Glen Burke. Two sources for volunteers are pilots and recent retirees. When seeking volunteers, Burke advised targeting requests to people likely to have the specific skills needed, which will help avoid getting people who are unfamiliar with using airport equipment. And be sure to give recognition to and train volunteers just as you would paid employees, Burke added.

Steve Wentworth with the City of Cambridge discussed the relationship between the city's public works department and its airport. The two entities have a good equipment-sharing relationship, he said, so availability of equipment is not a challenge, but finding staff hours to run the equipment and manage the work is. The airport has used workers with the Sentenced to Serve Program, but the drawback is that they need a lot of supervision, Wentworth said.

GA future looks good, but different

Jeff Hamiel, executive director of the Metropolitan Airports Commission, returned to the forum to give his outlook for general aviation. He began by noting that general aviation contributes more than \$150 billion to the U.S. economy, employs 1.3 million people, and carries 166 million passengers each year. It serves its communities through air ambulance services, law enforcement, disaster response, FedEx deliveries, and other services—yet, “Almost nobody understands or realizes the impact of GA on our economy,” he said.

Two-thirds of flying is done for business purposes, Hamiel continued. Target

Corporation, for example, flies between two and three flights a day all over the country. “These [planes] are tools of businesses—they're not recreational vehicles, but that's the perception out there.”

General aviation has struggled as a result of the economic downturn. Shipments using general aviation have decreased, fewer pilots are emerging from training programs, and few buyers exist for the many used airplanes in the marketplace, Hamiel said. After five years of growth, aircraft shipments were down in 2008 and 2009.

Still, Hamiel said he is seeing some slow signs of recovery: corporate profits are

beginning to recover, the use of existing fleets is stabilizing, and inquiries for new orders are growing. And he sees potential new growth coming from light sport aircraft (LSA). “They're not a big moneymaker, but it's a way of getting people engaged in low-cost aviation participation, primarily focused on recreational flying,” Hamiel said. Because these aircraft require only a sport pilot certificate to operate (rather than a pilot's license), cost around \$120,000, and have a strong safety record, they're “a great entry-level option,” he added.

Regarding safety, 2009 was one of the safest years in general aviation history,

GA future continued on next page

Speakers share ways to generate revenue and interest for airports

In a session titled “Is an Airshow in Your Future?” panelists shared methods they’ve used to increase and diversify revenue streams for their airport, create activity, and prepare for new opportunities.



Brian Ryks

In the last eight years or so, hub airport expenses have increased faster than revenues, said Brian Ryks, Duluth Airport Authority executive director. Revenue for Duluth International Airport, for example, is significantly lower now than it was in 2001 as a result of the economic downturn. But the airport is committed to undertaking projects that add opportunities for future development in general aviation, Ryks said. For example, its \$3 million North Business Development project, begun in 2006 with several public and private partners, is developing a 12-acre site on the north side of the airfield with ready-to-build sites. The project should position the airport to act on

opportunities that arise without much notice and “prepare us for many years into the future,” Ryks said.

The airport has also hosted events, including the Cirrus Design Annual Migration, the Cirrus Supplier Symposium, and the Cirque de la Symphony, to bring people, money, and publicity to the airport as well as to the surrounding communities. And the airport has been hosting successful air shows since 2001.

Recently, the airport leased land to Jefferson Lines for a bus terminal. Ryks said he was at first reluctant, feeling the business might compete for customers. “In the end, I thought, they’re coming to town anyway, so we may as well work with them,” he said. “It gives us options in case there is a cancelled flight.” Because of the drastic differences in trip times that each company provides, competition is not an issue, and the airport has benefited from the partnership through parking payments, concession earnings, terminal fees, and public exposure to the airport.

Al Pelzer, Fairmont Regional Airport manager, described how his airport made hay on its land when the price of diesel and corn were high in 2008 in response to the difficult economic conditions. Pelzer said the airport also participates in seasonal celebrations that gain publicity for the airport.

Finally, Sandy DePottey from the FAA discussed how airports can ensure that the revenue they bring in is within FAA guidelines. DePottey pointed out that airport revenue needs to stay with the airport that generated it to help support its facilities. Airports also need to charge reasonable fees and be “as self sustaining as possible” because of grant assurance requirements.

When vacant land surrounds an airport and budgets are tight, the airport may feel pressure to release, or sell, that land for development. Any sale of land must be approved by the FAA and follow set guidelines. “We don’t like to do land releases, but it’s on a case-by-case basis, so you can work with us,” DePottey said.

GA future continued from previous page

based on 100,000 hours of flying time, Hamiel noted. Fatal accidents have declined more than 56 percent in the last three decades due to changes in aircraft design and manufacturing, better pilot training, and stronger regulatory oversight.

Hamiel also gave an update on the MAC reliever system, which consists of six airports in the metro area designed to decrease congestion at the Minneapolis-St. Paul International Airport. Operations at the relievers have declined from 827,386 in 1999 to 389,843 in 2009—a 52 percent drop, Hamiel noted. The number of aircraft based at reliever airports has declined in the past decade as well, and less flight training is occurring. Hamiel said the MAC continues to believe that the reliever system is essential but is attempting to size it right for demand. Recent improvements include installation of a sub-drain system at the St. Paul Downtown Airport, two runway extensions and a new area for hangar development at Flying Cloud, and additional taxiways and lighting at the Anoka County–Blaine Airport. The Crystal Airport closed four of its runways, and future projects include removing the turf runway and one paved runway, which would reduce maintenance costs without affecting airfield needs.

In closing, Hamiel said that general aviation will probably never be able to attain the level of success it had in the 1960s, but it will recover. “It will come back strong...[but] as a very different-looking animal. We need to have the infrastructure and facilities available so that when things do begin to recover we’re not only expanding to improve our facilities, but to...meet the needs of the new generation, the new type of users,” he said. “GA is not dying, GA is changing.”

An airport’s evolution: the story of the Alexandria and Albert Lea airports

During the first of what is planned to be an ongoing feature of the fall forum, two airports were invited to tell the story of how they began, overcame challenges, and grew into the airports they are today.

Alexandria Municipal Airport

Todd Roth, Alexandria’s airport manager, and Lyle Kratzke, a consultant with TKDA, began with the story of Alexandria Municipal Airport. Alexandria’s first airport was built in 1928 in response to Northwest Airline’s request for a landing site. That



Todd Roth

site was relocated in 1931 when a NE-SW 2000’ x 300’ runway and a NW-SE 1800’ x 300’ runway with a standard 100’ circle at the junction were built. Lights and radio abilities were installed and the field’s status was changed from an emergency field to full-time operation in 1934. In 1942, the Alexandria airport was awarded a \$950,000 makeover by the Civil Aeronautics Authority for national defense purposes. Through the War Powers Act, 535 acres were confiscated. The federal government paved the runways and the airport was used as a refueling and emergency base for bombers.

The first building on site was the arrival-departure building, constructed in 1946. In 1975, a master plan was developed and

the airport continued to expand. A major planning study conducted in 2003 paved the way for the most recent development. The airport, named Chandler Field in 1978, now has two paved runways and more than 50 based aircraft. It conducts 25,500 operations annually.

Albert Lea Municipal Airport

Airport manager Jim Hanson and Mead and Hunt consultant Matt Wagner shared the history of Albert Lea Municipal Airport. The airport was originally constructed as a civilian pilot training facility during World War II, as the old airfield didn’t meet specifications. Originally, it was a grass “all-way landing field”; the first paved 3,800’ runway was constructed in 1955, and the plan was to eventually use that runway as a taxiway. The runway was lengthened to 4,500’ in 1970.

In 2003, Mead and Hunt completed a master plan, which was followed by an environmental assessment and engineering design. Construction of a new runway began in 2008 with the adjacent Plaza Street Road Relocation, which moved the roadway out of the future runway safety area and obstacle-free zone. This also provided for onsite mitigation of wetlands. Relocated Runway 16/34 was in full construction mode last summer and is set to open in the spring of 2011. Conversion of existing Runway 16/34 into a full-length parallel taxiway will also take place in 2011. Hanson noted that the first airplane to take off from the original runway in 1955 was also the first to take off from the new runway last year.

The Albert Lea airport has more than 26,000 operations each year and 40 based aircraft.

Walking tours give attendees closer look at airport operations

The second day of the forum concluded with walking technical tours at Alexandria Municipal Airport, where attendees talked with experts about pavement, fueling, lighting, and equipment.

Pavement maintenance and rehab

Tom Wood, Mn/DOT, and Dave Rettner, American Engineering Testing, offered hands-on advice for both airport asphalt and concrete pavement maintenance and repair.

From year one, it's critical to conduct preventive maintenance on asphalt pavement, Wood said. Placing a fog seal immediately after paving will seal the pavement and protect it against weather, oxidation, and deicing chemicals. Unlike roadways, airports do not have the traffic to further consolidate the voids in new pavement, so pavement may remain porous, allowing for faster oxidation and weather distress. Preventive maintenance is required on all types of pavement to protect from the most common type of distress in Minnesota: environmental and age-related.

Cracks in asphalt can be repaired by either crack sealing or full-depth crack repair. Cracks may be blown out with a hot lance or with a high-pressure air hose, and Wood discussed the benefits and use of each. Sealant materials are selected based on the type of cracks: transverse cracks, which are perpendicular to traffic, should be sealed with a low modulus (or more flexible) sealant. Longitudinal cracks, which run in the direction of traffic, can be sealed with a higher modulus (and stiffer) sealant. An overband of sealant (sealant banded over the crack, typically 2" to 3" wide) is not recommended for airport pavement.

Surface treatments include slurry seals, fog seals, and overlays; all are designed to protect the pavement structure from wear and oxidation. A fog seal can be placed immediately after paving to seal an asphalt pavement's surface. An overlay, which is a layer of asphalt concrete, is the only surface treatment that will add structural strength to a pavement.

Most Minnesota airport pavement is

asphalt, but airports that do have concrete should conduct preventive maintenance to preserve its integrity. Common distresses in concrete include corner and mid-panel cracking, spalling, and settling. These distresses may be visible in hangar floors as well as on outdoor aprons and pavements.

Fuel system maintenance

Craig Holmquist, regional sales manager for O'Day Equipment, discussed requirements for an airport that sells fuel on site, including maintenance and testing, safety procedures, spill protection, and Minnesota Pollution Control Agency (MPCA) and National Fire Protection Association requirements. Most important, he covered compliance with state regulations for fuel farms, specifically MPCA criteria.

An airport's fueling operations should be



Craig Holmquist talked about airport fueling systems.

checked daily as part of its self-inspection process to ensure compliance with local fire safety codes, Holmquist said. He advised that the inspection also include a check of security, fire protection, general housekeeping, and fuel dispensing facilities. During this daily check, the airport inspector should also determine if the fuel operator is permitting any unsafe fueling practices or is violating local fire code, such as failing to ground aircraft with mobile fuelers.

Lighting maintenance and care

Once again, Mn/DOT principal engineer John Schroeder shared his vast knowledge on airfield lighting maintenance with forum attendees. The tour began in the electrical building, where Schroeder told participants

to lock the electrical shed when working on lighting, turn off the breakers, and pay attention to grounding issues, as current may pass through the ground or stakes. This provided a good foundation for understanding the proper safety procedures when dealing with the electrical equipment. The tour then moved out to the airfield, where participants learned about PAPI (Precision Approach Path Indicator) installation and proper alignment.

PAPIs need periodic adjustment to ensure they are aimed properly. With Alexandria's four-box PAPI, Schroeder demonstrated an alternate method to verify the correct angle of each box by using a laser level and PVC piping. He has developed reference tables that airport staff can use when adjusting the system, and he offered to help airports implement the process. Schroeder noted that this system is simple to set up and uses items available from a hardware store.

Since both runway and taxiway lights are high voltage, all light circuits should be shut down when changing bulbs, Schroeder said. Maintenance staff may wish to turn off regulator supplying power when changing bulbs, since pilots can remotely turn on runway lighting systems without checking in with the airport. Schroeder also discussed the new LED lights, noting that several Minnesota airports are using them already. He also warned participants that quartz lamps could explode if the power is on when they are changed. And quartz lights are extremely hot, so workers should use gloves when changing them, Schroeder cautioned.

Airport equipment

Airport manager Todd Roth and lead lineman Kenny Earl showcased their equipment and discussed methods they use to maintain the Alexandria airport. Those in attendance were encouraged to explore the mower, snowblower, and batwing plow parked in one of the hangars and participated in a discussion on recommended practices and equipment acquisition.

AirTAP was developed through the joint efforts of the Minnesota Department of Transportation (Mn/DOT), the Minnesota Council of Airports (MCOA), and the Center for Transportation Studies (CTS).

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The University of Minnesota is an equal opportunity educator and employer. This publication is available in alternative formats upon request; call CTS at 612-626-1077. Printed on recycled paper with 20% postconsumer waste.

Airport Technical Assistance Program
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200 Transportation and Safety Building
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Minneapolis, MN 55455-0375

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