

# AIR TAP Briefings

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

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**Special Fall Forum Issue:** This issue of AirTAP *Briefings* features extended coverage of the 2012 AirTAP Fall Forum. (Mark your calendar for the 2013 Fall Forum, Sept. 26–27, at the Metropolitan Airports Commission, Minneapolis.)

## Fall forum focuses on maintaining airports, industry

The 2012 Fall Forum, held September 27 and 28 in Mankato, Minnesota, drew attendees from across the state to learn from each other and the aviation experts who presented.

Jim Grothaus, AirTAP director, kicked off the forum with opening remarks and introduced Christopher Roy, director of the Minnesota Department of Transportation (MnDOT) Office of Aeronautics. Roy reported that the state airport fund has increased this current fiscal year because of the Northwest Airlines bankruptcy payment, and the legislature granted a slightly higher appropriation than normal. His office is making it a priority to get funding out to airports and encumber the money early to lessen the chance it could be used

later to help balance the state budget. Budget years, Roy said, “have not always been kind to the airport fund.” Other initiatives the office is working on include warm-mix asphalt testing for airport pavements and innovative contracting.

Following Roy, Laurie Suttmeier with the Federal Aviation Administration (FAA) and Shawn Germolus, Range Regional Airport, gave brief updates on FAA and Minnesota Council of Airports activities.

The forum was sponsored by Minnesota AirTAP (housed within the Center for Transportation Studies) and the MnDOT Office of Aeronautics, in cooperation with the FAA and the Minnesota Council of Airports.



Fall forum attendees gathered in Mankato.

## Airports urged to try ‘new school’ marketing tools

Marketing your airport means building relationships with your users and selling the value of your airport—and new media channels offer low-cost, more immediate ways to do that.

Rachel Obermoller, an aviation representative with MnDOT and moderator of the agency’s Twitter and Facebook accounts, shared ideas for using electronic communications and social networking to promote a community’s airport.

“Old school” marketing channels—print ads, brochures, mailings, signs—are still valid, but also expensive, she said. “New school” channels such as websites, e-mail campaigns, social media, and events usually cost less and provide “more bang for your buck” when you use them to build on the other traditional methods.

If you have a website, she told attendees, you need to think about who’s going to be looking at it (such as residents or people who may be flying into your community) and what information they’ll want (e.g., contact information for the fixed-base operator, fuel prices, airport happenings).

For airports without a website, Obermoller suggested they ask to be added to their city’s website. “It may be something that requires very little activity on your part, and all of a sudden you’ve got a web presence,” she said.

E-mail lists are another way to reach a wider audience, she said. Consider maintaining lists of people in your community who are interested in airport activities or a list of tenants at your airport, Obermoller said.

Social media sites such as Facebook, Twitter, LinkedIn, and AirNAV are other channels, serving different audiences and purposes. AirNAV, for example, is

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## Mutual aid agreements ensure help when needed

In a session on mutual aid agreements, Kim Kenville, a professor at the University of North Dakota’s School of Aviation, discussed findings from two research projects she participated in: ACRP Report 73, *Airport to Airport Mutual Aid Programs*, and an in-progress synthesis titled *Model Mutual Aid Agreements*.



Kim Kenville

Basically, mutual aid is a written agreement between agencies or other groups to lend assistance across jurisdictional boundaries, with the intent that you use your own resources first, Kenville began—although different groups may define it differently. It typically does not involve payment, reimbursement, liability, or mandatory response. “I think that’s really important—it’s not a contract, it’s more of a helping type of situation,” she said. FAA AC 150/5200-31C, *Airport Emergency Plan*, offers guidance but doesn’t define what a mutual aid agreement is. “It kind of leaves it up to you, the airport, as to what your mutual aid agreement looks like,” she said.

And some groups purposely do not have written agreements because of potential liability issues, she added. “I think that has to be a conversation between your entity and your general counsel to see what you think is going to happen. We’re seeing a big surge...in unwritten agreements.”

Another problem is that since many agreements are done with a handshake between two people, “When one of those people goes away, so does the agreement,” she said.

Forty-two states currently have laws to protect volunteers. “This is becoming a big issue with medical responders; when they’re off duty, will they respond or not? [It] may depend on what state they’re in.”

According to the research findings, written agreements were most common with police and fire departments. However, airports need agreements for other items, not only airplane accidents, Kenville said. Other agency partners in written agreements included EMS, local government emergency management, the Red Cross, local health departments, municipal utilities, the TSA, and hospitals.

Some respondents assumed they had agreements included in existing contracts or leases. “If you think they’re implied in your lease or contract, you need to make sure they are,” Kenville pointed out that airports may also assume that if it’s owned by the county or the city, it doesn’t need to have written agreements because the city or county’s resources would help when needed—but that may not be true.

Items essential to any mutual aid agreement include support from management, legal review, identification of parties, types of emergencies covered, type of aid, clear communication methods, timeframe, restrictions/limitations, legal basis (enabling agreement), AEP inclusion, NIMS compliance (tack on to local police training, etc.), contact lists, effective date, and a date for review.

## Programs prep students for aviation careers

Despite upheavals in the industry, students still seek out careers in aviation, and schools adapt to prepare them. This year's Fall Forum offered a glimpse of the aviation programs at Minnesota State University, Mankato (MNSU), and the University of North Dakota (UND) in Grand Forks.

Keri Giles, an American Airlines pilot and adjunct instructor with MNSU, gave an overview of the school's aviation program. The program began in the mid-1970s as a pilot training program; aviation management was later added as a major. The program currently has about 110 flight students and 40 aviation management students, Giles said. Like Giles, faculty in the program have a broad range of real-world experience.



Airplanes used for MNSU's flight training at the Mankato airport

Emphasis in the program is on multi-engine training; North Star Aviation, located at the Mankato airport, provides all of the flight training. "A goal is for students to be able to transition from school to industry without having to learn a lot of new stuff," Giles said.

Other courses include aircraft performance, advanced aircraft systems, long-range and international navigation, and air traffic control. Courses in the aviation management track include a broad area of busi-

ness management and finance courses; the aviation emphasis focuses on management areas with a general knowledge of light operation. Giles said that most students obtain their private pilot certificate, which is highly encouraged in order to better students' job prospects.

The program is working to be accredited with the Aviation Accreditation Board International, Giles added.

Professor Kim Kenville teaches at the UND John D. Odegard School of Aerospace Science, serving as director of the aviation department's master of aviation degree. She also serves as North Dakota's aeronautics commissioner.

"A great thing I get to do is send students loose into the industry," she said, and she thanked those attendees that have provided internships with their airports.

Of the 1267 undergraduate aviation majors, 55 percent are in professional flight, 25 percent in air traffic control, 13 percent in aviation/airport management, and 7 percent in unmanned aerial systems (UAS), the newest major. The school also recently added a master of science in aviation and has 40 graduate students and 275 international students. It's designated as a Center for General Aviation Research, and it conducts research in such areas as UAS, automatic detection surveillance broadcast, remote runway lighting, and FAA/industry training standards.

The school has 47 full-time faculty with a range of professional experience. The program runs about 100 aircraft at any given time, with training facilities located at the Grand Forks International Airport. "We're proud to say we're part of the 22nd busiest airport in the country."

## Future for aviation professionals may see more demand, less supply

Jeff Hamiel, executive director of the Metropolitan Airports Commission, returned to the forum to share his thoughts on how the aviation industry is evolving and what aviation professionals need to do to sustain it.



Jeff Hamiel

"What's happening in the United States today is we're going 100 miles per hour toward a brick wall," he said. "We don't have enough pilots in the pipeline...to meet the demand for the pilot shortage that's coming about 7 to 10 years down the road."

The world has changed, including the criteria and complexity of aviation, Hamiel continued. As a result, the next generation will see a shortage not only of pilots, but also of people who know how to run and manage airports and aviation departments.

According to the International Civil Aviation Organization, the number of flights worldwide is predicted to double to 50 million annually by 2030. As a result, nearly one million pilots, more than double today's supply, will be needed. The shortage stems from a number of factors, Hamiel said. In North America, a wave of pilot retirements is expected soon. Other studies point to a loss of industry glamour, substantial and repeated furloughs post-911 amid airline bankruptcies, mergers, and a global recession; a loss of seniority for furloughed pilots; and declining wages.

The airline deregulation that took place in 1978 shaped the airline industry into what it is today and brought about a paradigm shift, he said. "The winners so far... in my opinion, are the airline companies. They have great leverage and authority and power. And general aviation is just taking a shellacking." In the Minneapolis-St. Paul metro area and greater Minnesota, airplanes are sitting in hangars because people can't afford to insure or fly them. Many fixed-base operators on airports have closed as well.

While it's critical to get young people interested in aviation careers and flying, those young people face a tough road, Hamiel continued. Commercial flight training can cost \$80,000 on top of a four-year college degree. The time investment is substantial, too. The FAA recently changed its requirements, so new pilots must put in 1,500 hours of pilot flight time before they can fly for U.S. commercial airlines. Working full time, flying 200 hours per year, it would take a pilot six to eight years or more to reach that, while making only about \$22,000 annually flying with a regional airline, Hamiel said. "With a \$125,000 college debt walking out the door, that's a pretty steep hill to

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## Relocation laws can affect land acquisition

Jason Alt, ProSource Technologies, and Joel Dresel, SEH, shared what airports should know about land acquisition as it relates to displacing people, homes, businesses, or farms.

Alt explained that the Uniform Relocation Assistance and Real Property Acquisition Policies Act, or Uniform Act, is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) and/or displaced persons. The Act aims to provide uniform, fair, and equitable treatment of persons whose property is acquired or who are displaced in connection with federally funded projects.

FAA Order 5100.37B, Land Acquisition and Relocation Assistance for Airport Projects, provides the basis for the FAA to monitor and ensure airports are complying with the Uniform Act in their projects—and thus, the FAA may not accept work that doesn't comply.

Relocation is the act of moving from one place to another, but it's much more complicated than that when it comes to the law, Alt said. For example, there are differences between residential and non-residential. Minnesota also has state

laws and legislation to comply with—for example, a higher cap for business relocation expenses.

Alt said airports also need to know that if they're going to hire someone to conduct activities related to acquisition and relocation, they need to be licensed according to Minn. Statute 82.81.

The types of projects affected are those for which an airport is acquiring an interest in land or affecting people or personal property, such as for runway expansion or noise mitigation.

Alt also said passage of MAP-21 (Moving Ahead for Progress in the 21st Century) in July 2012 will affect the current Uniform Act, probably in late 2013 or early 2014. Among those impacts are higher dollar amounts for relocation payments.

"A lot of displacing agencies think [complying]...is a hassle," Alt said. "The problem is, it's the law. If the FAA comes back and finds you haven't followed it, it's going to not only risk a lot of your funding for the project but it will cause problems trying to back into [it]."

Dresel advised airports planning land acquisition to seek help from a professional. "Nothing holds up your project more than 'We can do it ourselves,'" he said.

# An airport's story: Mankato Regional Airport

The Fall Forum's airport spotlight featured Mankato Regional Airport, which has been run by manager Kevin Baker for the last 15 years and by Mark Knoff, public works director, since 2007. Originally located to the east of Minnesota State University, the airport was relocated in 1969 and later established itself as Mankato's regional center. The airport has two runways and 71 occupied T-hangars. Baker, the only full-time employee, works to maintain 2.4 million square feet of pavement, 300 acres of mowing and trimming, almost 100 based aircraft, and 150,000 square feet of hangar space with a few other part-time employees. The airport's fixed-base operator, North Star Aviation, has been with the airport for more than 20 years and previously managed the airport until the city took over in 2008.

The airport underwent one of its biggest changes with the \$12 million expansion project completed in 2007. "One of the main problems was that we were in heavy gumbo soil. In the original construction, they didn't go down deep enough to get the base needed for the [15/33] runway," Baker explained. The airport can now accommodate an aircraft as large as a 757 and expanded from 840 acres to 950 acres.

"We did a total reconstruction of 15/33, a summer-long process," Baker said. The concrete runway that went through the intersection was recycled and a new sand base was put in, making the new runway 100 feet wide by 6,600 feet long, with 12-inch-deep concrete. "We can now land anything with a single aisle," Baker said.

The airport's main event, the Minnesota Air Show Spectacular, took place on June 9 and 10 of 2012 and was immensely successful, drawing more than 35,000 attendees, Baker said. The Blue Angels, the Black Daggers, Team Oracle, the Aeroshell Aerobatic Team, and wing walkers were among the performers. "Anyone who's done it knows it's like a second full-time job," Baker said of the effort required. The show raised \$25,000 for various charities, with \$10,000 going to the United Way. The airport also brought in \$170,000 in cash sponsors.

According to Knoff, the airport has a history of being highly involved within the local community, and Minnesota State University's aviation program has helped in continuing the airport's growth through grants and support from the surrounding community.

Mankato is unique in how it



Mayo Clinic Life Flight maintains a base at the Mankato airport.

funds the airport compared to most communities, Knoff said. Rather than a levy, the airport receives a half-cent sales tax that was renewed through 2022. "We can plan into the future with projects, so that when dollars become available we can act," Knoff said.

The airport invests time in repairing and restoring pavements and working on its hangars and facilities. It has a long-term lease with the Mayo Clinic Life Flight and installed a new hangar built to its specifications. The airport's next priority is to promote business development, as commercial air service is not a priority at this time. "We're focusing on the things that will bring jobs to the local area," Knoff said. "The community is very supportive of the airport, and there are people out there interested in making it successful."

## Surveys find wide-ranging rates and charges

Recent surveys of Minnesota and North Dakota airports showed major variations in such things as what airports charge tenants, how they contract with service providers, and size of operating budgets.

Professor Kim Kenville with UND conducted a survey in 2009 of North Dakota's 88 airports for the North Dakota Aeronautics Commission [To view this survey, visit <http://kimkenville.com/projects.htm>].

Results showed "a huge disparity among airports" that made it difficult to make comparisons and benchmarks, she said.

For example, among the state's four primary airports, terminal rental fees ranged from \$10 to \$23 per square foot. At GA airports, ground leases and agricultural rent were "all over the board." And commercial service airports in the state's oil boom region are charging considerably more while outgrowing their facilities.

Although she couldn't offer any concrete recommendations from the survey, Kenville said airports need to monitor what the benchmark airports are doing while paying attention to differences, "and realize you can only squeeze so much out

of your tenants."

Shaun Germolus, Airport Admin and Range Regional Airport, reported similar disparities among Minnesota's airports in a survey he conducted last year, with assistance from AirTAP and Kenville. [To see complete results of the survey, visit [www.airtap.umn.edu/topics/rates/](http://www.airtap.umn.edu/topics/rates/)]. Although seven of the state's nine commercial service airports responded, only 14 of the 120 GA airports did.

"But we do have nice data," he said. "It helps when you're budgeting or negotiating a lease, to know where you're at."

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climb."

Hamiel predicts that eventually supply and demand will drive some salary improvements. For aviation programs, guaranteed training loans and alliances with regional carriers might prove helpful. And the aviation community can help by raising awareness of the issue and the need for all jobs in aviation, not just pilots. Professionals can also support educational efforts and sponsor internships. "You need to give young people with an interest in aviation a pathway through the maze, and help them get down that pathway by encouraging and supporting them," Hamiel said.

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often used by pilots wanting information about an airport and fuel prices. (Posting fuel prices, which Obermoller highly encouraged, can be done with a free user ID.) Users can also leave comments about their experience at your airport, making it a good way to monitor your feedback, Obermoller said. A basic subscription costs \$50 annually; a benefit is that it will link to your airport website, and you can add your contact info.

Facebook is the most visited site on the Internet and is a great hub for businesses to share information—not just high school girls sharing prom photos, Obermoller said. If your airport doesn't want its own account, try to piggyback on your city's, Obermoller said. "If you have an event, it's a way to generate buzz," she said. "It lets [people] know there is value, there is stuff going on. It's not just an empty ramp that people use when they want to go and fly their expensive airplanes." Obermoller advises posting a minimum of once per week, which doesn't require hours of effort. Also, avoid posting too much about your business or people will lose interest, she said. "You need to make it fun."

Whatever methods you use, remember to engage members of your target markets—pilots, tenants, airport users, members of your community—to get feedback and learn if your efforts are working, Obermoller said.



Rachel Obermoller

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# Speaker offers tips on concrete rehab

An airport's pavement is typically its largest investment—and one that needs regular maintenance. As asphalt and bituminous prices continue to rise, more people are looking at concrete as a less costly option for pavement construction. According to Matt Zeller, executive director of the Concrete Paving Association of Minnesota, the price of concrete has been down in the last five or six years and asphalt has been up, which brings them closer to each other in price.

Zeller emphasized the importance of fixing problems sooner rather than later, when it will be much more expensive.

There are several steps in selecting pavement to rehabilitate. First, the pavement's history needs to be considered, then the pavement is cored. "It's been like cutting teeth to get someone to cut a hole in their pavement, but you have to know what's going on below," Zeller said. The rehabilitation goal also needs to be defined,

whether it's to address ride, noise, or maintenance issues. It's also important to determine the cause of distress (e.g., material, structural, construction, or drainage) and the duration of the expected repair—is it a 5-year fix or a 20-year fix?

Zeller advised starting with the best pavements and working down to the worst, rather than "worst first." This allows an airport owner to maintain their best pavements in good condition, and deal only with those needing specific repairs.

Using the City of Duluth as an example, Zeller talked about the cost per square foot of rehab and shared images of typical removal and crack repair methods.

During the tour at the airport, he offered a suggestion for how to ensure that old pavement was completely removed to enable a good bond by using sounds made with a hammer or chain. He demonstrated how the sound changed as the chain was

dragged over pavement in good condition versus pavement in bad condition.

Zeller also suggested using dowel bars to enhance consistency in the slab surface. The FAA recommends doweling the last three joints of a runway, but in Minnesota "we dowel it all the way," Zeller said. "A lot of airports don't typically use dowel bars except in Minnesota. We sort of treat our runways like highways."



Matt Zeller demonstrated a pavement testing method at Mankato airport.

# Perspectives on plowing

When the snow starts falling on Minnesota's airports, those responsible for clearing it know they'll be wrestling with decisions on whether to close the airport, when to plow, and how to best communicate conditions. During this panel discussion, several airport professionals discussed their approaches to snow removal.

"Airplanes aren't like cars," said Al Pelzer, manager of Fairmont Regional Airport/Five Lakes Aviation and a pilot. "You can plow through a pretty big windrow with a car and it doesn't really matter. But for airplanes we don't even leave little snowballs out there," he said. When plowing at Fairmont, Pelzer said staff starts at the back of the airport and moves toward the front, "mostly because as we're plowing we're leaving this big windrow; if there's six inches of snow on the main runway you can still land on it, but once you make a pass across it, you've pretty much closed that runway."

He also urged consultants to consider how an airport will move and store snow when planning an airport's design.

In his position at MnDOT, Jeff Flynn, formerly an airport and FBO manager, flies around to Minnesota's small airports and occasionally finds evidence that an airport lacks a professional manager on site—things such as a badly placed snow bank that could clip an airplane's wing. When a city's public works department is responsible for plowing the airport, those staff may not know how it differs from plowing a city street. "It's a training thing," he said.

Concerning standards, Flynn said the FAA's Advisory Circular on snow and ice removal (AC 150/5200-30C) notes that an airport should identify priority areas for clearing: airside is the primary runway and primary ramp area; secondary is the cross-wind runway and secondary ramp area. And the groundside priority area is the one that runs around the perimeter of the airport. "You have to have emergency access to the airport," he said. "A sub-benefit is that then you can have your...

equipment going around the perimeter rather than having to go on the taxiway or runway to get to the other side of the airport."

Flynn also reminded airport managers that funding is available for snow and ice control equipment if it's included on their CIP. He recommended starting with a carrier vehicle that can be used with a plower, blower, or mower.

And when operations or conditions don't work out as planned, use NOTAMS, Flynn said in closing. "Issue them early, issue them often, and make [it] sound worse than it is," he said.

Following Flynn, Joe Harris, manager of the MAC's Anoka County, Lake Elmo, and Blaine airports, acknowledged what most people know about predicting the weather. "Any of us who are in this business know there's no template for how snow falls... The reality is that we all get Monday-morning quarterbacked into why we did it [a certain] way."

Harris said managing snow removal incorporates "4 Es —economy, efficiency, effectiveness, and equity." Economy involves finding the right balance between how much to pay to clear the airport right away, which may mean weekend or holiday pay, versus waiting and paying more because of packed conditions or lost airport activity. Efficiency involves determining how much to spend on the large airports versus small, considering that the expectations of the recreational small-airport user have been upgraded. Effectiveness considers if the airport is doing what it set out to do while recognizing there's no perfect way to clear snow every time. And equity considers what is fair, and why one area might be done before another.

Harris said he knows his reputation hinges on snow removal. "If we're not providing timely snow removal services, that is usually a barometer for people to judge how the airport agency is performing... That's the first issue people raise."

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