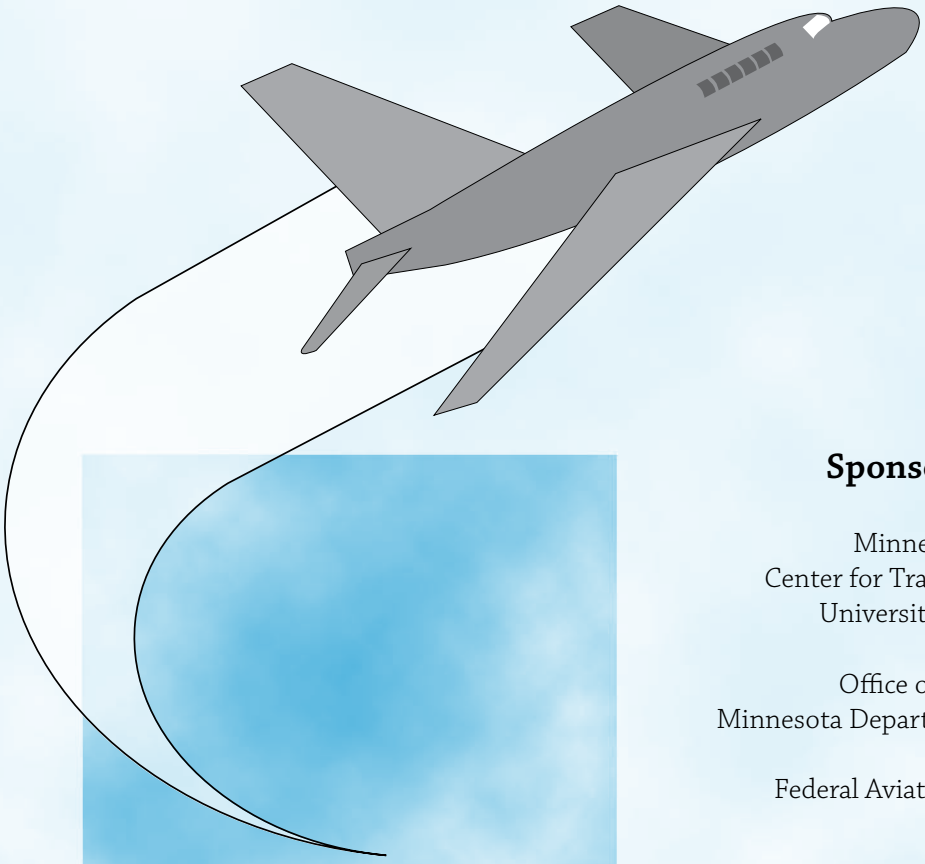
AirTAP Fall Forum

October 11–12, 2005 • Brainerd, Minnesota

Proceedings



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>
> —Cheri Marti

Opening and Welcome

On October 11 and 12, 2005, the Airport Technical Assistance Program (AirTAP) held its second fall forum in Brainerd, Minnesota. Last year's forum deviated for the first time from AirTAP's traditional one-day, one-topic training workshops previously held at various times and locations throughout the year. Because of the success of that format, it was brought back again this year in a two-day event that covered a mix of topical general aviation (GA) subjects. Attendees participated with aviation experts to learn about airport technology, insurance issues, pavement maintenance techniques, environmental concerns, and many other topics.

To kick off the first general session, **Cheri Marti**, assistant director of education and outreach with the Center for Transportation Studies (CTS), provided a brief history on AirTAP and explained what participants could expect from the forum. "We have a great cross section of contributors, and we've packed a lot of information into this two-day event. Our hope is that when you leave you will apply the new practices and solutions you learn from the experts and from each other," Marti said. "We want you to walk out of here with an expanded network of people you can connect with once you are back at your airport."

Glenn Burke, airport manager of the South St. Paul Airport, agreed that the event offers a great training opportunity encompassing real-life airport experiences. "As airport managers, we wear a lot of hats," said Burke, who also serves on the AirTAP steering committee. "That's why we have included such a diverse range of topics in this unique event."

Peter Buchen, airport development section manager with the Minnesota Department of Transportation (Mn/DOT) Office of Aeronautics and chair of the AirTAP steering committee, reminded participants that part of AirTAP's mission is to develop tools for airport managers and owners to help them better do their jobs. "We thank you for being here and for your commitment to providing an excellent aviation system to our state and nation."

Cheri Marti

Glenn Burke

Peter Buchen

Since the 1970s, ongoing development has made the land around airports more and more valuable. Because of this trend, Mn/DOT's Office of Aeronautics recognized a need to compare Minnesota's new demand for developable land with the rest of the country's and is now nearing completion of an in-depth compatible land use study.

Tina Axelrad, from the land use planning and policy consulting firm Clarion Associates, discussed the status of the study and explained the overall goals of the project, which are to evaluate Minnesota's airport land use controls, provide guidance for compatible airport land use in Minnesota, and develop an airport land use compatibility manual. The session was moderated by **Kathy Vesely**, with assistance from **Debra Sorenson**. Both are with the Mn/DOT Office of Aeronautics.

Mn/DOT's study consisted of a series of tasks, the first of which involved review of existing ordinances, airport interviews, and research on compatibility and risk issues. Through these efforts, Axelrad and her team found that most of Minnesota's land use ordinances were adopted or amended before 1980 and are now outdated. They also found differences between local government requirements versus state requirements.

In task two, the team examined the takings law in Minnesota to find out what challenges local governments were facing. Nationally, takings law favors local airport zoning regulations, Axelrad explained. However, Minnesota has a unique "enterprise/arbitration" test required in regulatory takings. In essence, this makes it much easier for aggrieved property owners to sue over airport zoning in Minnesota than virtually any other state in the country. Axelrad cited the case of *McShane* v. *The City of Faribault* (MN 1980), which resulted in an unconstitutional "taking" because the airport zoning was shown to cause substantial loss of property value. This case, she explained, has cast a cloud over local efforts to be more aggressive regarding airport zoning in Minnesota.

Task two also involved research on other states' compatible use manuals, on select Minnesota ordinances, and on other municipal airport zoning ordinances. "Our focus was on safety, not noise," Axelrad said. "From this research, we put together a use table to show land uses that would be considered compatible or not compatible in each of the three airport safety zones."

In task three, Axelrad's team looked at how Mn/DOT could be more flexible in setting the dimensions of the A, B, and C safety zones at airports. Predictions are that requests for leeway in this area will come up more and more, and according to Axelrad, Mn/DOT needs to be prepared to consider such requests case by case and avoid a "making-it-up-as-we-go" approach.

In task four, all of the research findings will be pulled together to create a user-friendly manual. This manual, due out in 2006, will provide a look at the system today and will include preventive and corrective tools for compatible land uses, applicable laws and legal issues, and airport safety zoning mechanics and procedures that include revised model airport zoning ordinances and options for tailoring them to local circumstances.

For more information on the compatible land use study, visit www.dot.state.mn.us/aero/avoffice/planning/studies.html.

Kathy Vesely


Ann Rest

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> —Sen. Ann Rest


Michael Beard

> "One of things I'm concerned about is the regressive nature of our taxation on large corporate airplanes."
>
> —Rep. Michael Beard

In this session, moderated by Peter Buchen of Mn/DOT Aeronautics, a panel of distinguished legislators offered insights on state and national aviation policies and trends.

The state perspective

First to speak was Senator **Ann Rest**, who chairs the Minnesota Senate Aviation Subcommittee. This subcommittee was formed last year to handle issues specific to general aviation. "While this committee will not deal with noise mitigation at the Minneapolis/St. Paul International Airport, we are concerned about zoning and land use issues, and we're eager to review Mn/DOT's compatible land use study manual when it comes out," Rest explained. "We understand that we have to be careful not to turn best practices into mandates. We will let Mn/DOT come to the legislature with recommendations, and we will use those to guide us."

She described the political climate at the legislature during the 2005 session, and admitted the session was difficult due in part to severe budget challenges that ultimately resulted in a partial government shutdown. Rest predicts the 2006 session will be challenging as well, and hopes there is neither a significant deficit nor surplus to deal with so legislators can focus on policy issues. During the 2005 session, Minnesota legislators did pass a Department of Aeronautics bill that, among other things, streamlined the airplane registration process and eliminated the Minnesota Aircraft Registration Decal effective July 1, 2005. "It was very gratifying that this bill passed and didn't get caught up in the overall transportation bill, which was vetoed," Rest said.

She explained, too, that there are a number of federal issues over which the state has little control; security, for one, is regulated by the Transportation Security Administration (TSA) or the Federal Aviation Administration (FAA). "Although the state has only a limited role, security is something that is always on our minds as we work to maintain the safe operation of our airports and airplanes."

Next, Representative **Michael Beard** offered his perspective both as chair of the Minnesota House Subcommittee on Aviation and as a general aviation pilot. He also acknowledged some of the difficulties in the 2005 legislative session. Because of the close legislative count, "we got stuck in the mud and weren't able to come to a budget agreement in time to avert the partial shutdown," Beard recalled. On a brighter note, he continued, the Metropolitan Council Aviation Plan bill was passed, which authorizes the Met Council to put its aviation system plan in with its transportation plan, eliminating some redundancy, Beard said.

Beard reported that the aviation subcommittee is now turning its attention to the revenue-neutral shift between the fuel tax and the registration tax. "One of things I'm concerned about is the regressive nature of our taxation on large corporate airplanes," Beard said. "Some corporations register their jets in other states; those are good revenue and good employment opportunities that could stay in Minnesota. We want to encourage registration of more of these jets in Minnesota by raising revenue on the fuel tax side and lowering the registration fees without dampening the fuel sales business."

He closed his presentation by assuring the group that Transportation Committee members are also monitoring Northwest Airlines' (NWA) bankruptcy. "Just know that we are paying attention to this, and we understand this is important to the economic development and the fabric of your communities."

The national scene

Congressman **James L. Oberstar**, ranking member of the House Transportation and Infrastructure Committee (and member of the Aviation Subcommittee), then delivered a few remarks on the state of aviation from the federal view. In 2005, a billion people worldwide will travel by air, he said, and the United States will account for two-thirds of this number. "Aviation is roughly 10 percent of our gross domestic product," he continued. "Prior to the September 11 terrorist attacks, aviation accounted for 2.5 million jobs directly. Aviation is still vitally important to our economy, and it will continue to grow."

Oberstar reminded participants that the terrorist attacks were only partially to blame for the economic downturn in aviation. The United States was also dealing with the outbreak of Severe Acute Respiratory Syndrome (SARS) overseas, the Iraq war, and the overall

slowdown of its economy. Passenger yields today are still down, and recent rising fuel costs have taken a toll and caused many more job and financial losses in the industry, he added.

Oberstar acknowledged that the aviation industry continues to face serious troubles, but said he thinks it unlikely that the traditional legacy carrier "hub-and-spoke" system would be replaced with a "point-to-point" approach. "The hub-and-spoke system is still critical for the legacy carriers. If you think that Southwest Airlines or other low-cost carriers will replace that, try to get to London or Paris on one of those carriers. They don't go there, but the legacy carriers do, and that's why the hub-and-spoke system continues to work."

What does need to change, he added, is the way domestic airspace is used, which he believes should be restructured to include more efficient routes that would save fuel and travelers' time. "We still operate a system based on bonfires and beacons of the 1920s and 30s," Oberstar remarked. "We need to modernize that system, straighten out the routes, and vastly improve our weather technology."

In addition, security continues to be a concern—if not a drag—on aviation, he said. New leadership at the TSA, however, is assessing security screener needs at each airport and adjusting them for rush periods, among other efforts. "I still think that security at airports is an issue of national defense and that the money for airport security should come out of our defense budget. That's a discussion for another time, but I'll continue to make that argument."

The FAA is also facing serious challenges. The organization has recently undertaken its first cost allocation study and should have a report ready by the end of 2005 or in early 2006, Oberstar reported. "The FAA is evaluating the facilities and equipment side of their operations and will give us [Congress] an idea of what the costs are, what the benefits are to commercial aviation…and how to finance these needs."

In the 2003 FAA reauthorization bill, Oberstar went on to explain, the Small Community Air Service Development Program was reauthorized through 2008 to help small communities cope with the shrinkage or loss of commercial air service. He added that as the financial condition of aviation deteriorates, small communities must be involved. "It's exciting to see the expansion happening at the Brainerd airport," Oberstar said. "This is good for central Minnesota. If we don't keep aviation in small communities, these towns could be lost. Without air service, the only way to get to some of the towns in my district is to be born there."


James L. Oberstar

"If we don't keep aviation in small communities, these towns could be lost."

—Rep. James Oberstar

Concurrent Session 3A—Hangar Maintenance

In a session on hangar maintenance, moderated by **Ann Johnson** of Professional Engineering Services, speakers discussed maintenance and repair issues of hangar roofs and doors.

Joe Pelant, Inspec Inc., began by surveying the audience and noted the many styles—some newer, some decades old—of hangar roofs at Minnesota airports.

When conducting roof inspections, Pelant said he typically walks the perimeter of the entire roof, looking for open seams, blisters, loose and bagging flashings, and missing sheet metal, among other things. Over time some kinds of seams open up, Pelant noted, showing the audience photos of different types of damage.

When showing a photo of an obsolete vent stack, Pelant urged participants to get rid of anything they are not using. He also noted that asphalt dries out and cracks as it ages. Pelant urged participants to make sure their roof drains are cleaned out and that plants are pulled off the roof. "Trees can root into the roof system….I've seen it many times," he said.

When walking the field of the roof, he looks for surfacing problems, tears, holes and punctures, and spongy or soft areas.

One audience member asked whether ice guards could be used, and Pelant said yes, if they are strong and sturdy enough for the roof. Another participant asked whether they would have to replace all the rubber fasteners, which are failing, on a 30-year-old roof. Pelant responded that ideally, these should be


Joe Pelant

caulked, since replacing all the screws would be costly. Other options might be to coat the roof or lay metal on top, but the hangar designer should be consulted, Pelant added.

Following Pelant, **Jason Myrvik**, sales manager for Midland Bi-fold Doors, noted that the majority of hangar doors are bi-fold, and improper installation can lead to problems. He offered several tips for maintenance related to cables, bearings, chain and sprockets, the gearbox, weather stripping, hinges, and other door components.

According to Myrvik, lifting cables should be inspected every one to three months for signs of wear or fraying. Other items to check every three months include the tension on the cables, the cable wrap on the drum, and the alignment of the cable pulleys.

"If cables are worn, they have probably not been installed correctly, and the door will lift unevenly," Myrvik said.

For both top and bottom operators, regularly check the screw tightness on the pulley and sprockets (every three months), the oil level in the gearbox (every six months), the gearbox chain for proper lubrication (every six months), and the alignment of the chain and sprockets (every three months). "The proper alignment is key," he said. In addition, for a top operator, inspect the belt for signs of wear or cracking.

For weather stripping, check the top and bottom rubber seal. In addition, make sure hinges are lubricated when they are installed, and check annually to ensure proper coating, Myrvik added.

Concurrent Session 3B—Setting Good Airport Policy

"Verbal agreements alone do not provide a fair method of negotiating equitable policy with your tenants," asserted moderator **Ray Klosowski**, former executive director with the Duluth Airport Authority. "This is where minimum standards become important; you can use those standards to set good policy at your airports."

> **"You need to protect yourself from any ambiguity in the policy."**
>
> —Kelly Gerads

Creating policy for the large airport

Following Klosowski's introductory remarks, **Kelly Gerads**, administrative services manager with the Metropolitan Airports Commission (MAC), spoke from a large-airport perspective on developing good airport policy. She talked briefly about the process MAC follows, noting that there is no prescription for successful policy development that works in all cases. There are, however, standard processes to follow when developing policy, the first of which is to define the goals—that is, what are you trying to accomplish with the new policy? Is a policy the best approach? At this stage, Gerads also recommends defining the benefits and challenges of existing policies and considering the resources needed to develop the new policy as well as the best time to implement it. Upon deciding to proceed with a policy, the next step is to develop the draft language. "You can use the research of others to do this," she explained. "Collect their policy documents and find out what is working or not. Find out the costs of implementing the policy and assess whether or not that's where you want to go. Then, pick the best pieces of each policy and customize those for your situation. Analyze this information for loopholes, particularly if you are dealing with something controversial. You need to protect yourself from any ambiguity in the policy."

Next, solicit input from the parties involved by circulating the draft language to them for review. "We…incorporate the feedback into a formal document that answers all of the questions and responds to the comments," Gerads explained. "This serves as a record of why we did what we did."

Finally, modify the draft language based on the input received and adopt and implement the new policy. "When you're ready to implement the policy, be sure to communicate that," Gerads cautioned. "You may have tenants who were not part of the entire process. Make sure the final draft is available for review and that everyone is working off of the same page."

The small airport perspective

Next, **Barbara Hoyhtya**, city administrator for the City of Canby, talked about some of the policy development challenges small airports face. Currently, she explained, the Canby airport has three major projects under way. One piece involves expanding the runway from 2,600 to 4,400 feet long and from 50 to 75 feet wide. The second piece, which is tied to the runway expansion, will bring water and sewer out to the airport. The third piece entails constructing a new arrival and departure building. With this expansion, Hoyhtya explained, "We're going to need some rules and regulations. Until now, we haven't had any, and the airport has been left to do what it wants." To begin the process of creating some operational guidance for the airport, she obtained a set of minimum standards for airport aeronautical services, which she reviewed and then tweaked to meet Canby's specific needs.

With the recent addition of new airport buildings, Hoyhtya said the new standards will help make leases more uniform and will help address many of the questions that have arisen. "I am most concerned with safety and accountability," she continued. "I'm not sure if these future tenants have insurance or not. It's important that as a city, we can show the League of Minnesota Cities that we know what's going on at our airport. This protects not only the city, but also the owners and tenants using the airport." The city also has to follow affirmative action, non-discrimination, and non-exclusive-rights-type rules, she added. "Our pilots don't understand a lot of this, so putting it in writing will clarify the things we have to abide by at the airport."

Hoyhtya described examples of other situations that have come up and for which the airport previously had no standards in place. One circumstance involved an individual wanting to sell airplanes at the airport. "We didn't have anything in writing indicating whether or not we could even allow this." Another circumstance involved flight training. "I now know that there is a difference between a flight training school and someone just giving lessons," she said. "In either case, we need to know if the instructor has insurance, and we need that information on file. If there is an accident at the airport involving a student and instructor, they would hit the deepest pockets, and the City of Canby would be the first target."

"It's important that as a city, we can show the League of Minnesota Cities that we know what's going on at our airport. This protects not only the city, but also the owners and tenants using the airport."

—Barbara Hoyhtya

Concurrent Session 4A: Grounds Maintenance

In the session on grounds maintenance, **Dale Sutherland**, territory manager for United Ag Products, opened the session by noting, "There's actually a law against having weeds," referring to Minnesota's noxious weed law (see www.mda.state.mn.us/appd/weeds/fsmnwp.html).

As a first step for managing unwanted vegetation, you should target the species of weeds you want to control, since that will determine the method and treatment to use. For example, he said, if you cut down an aspen, new trees will sprout from the entire root system.

"One of the key things we focus on is integrated vegetation management (IVM)," he said.

Sutherland described the four components of an integrated vegetation management plan: mechanical (basic mowing, cutting); timing (not rutting up the soil when it's wet, not allowing weed seed to mature, knowing about the plant you're trying to control); chemical use (not just herbicides but fertilizer as well); and biological control (using plants' natural enemies). "All four of these tools are valuable, and when you use them in combination is when you're going to get your best results," he said.

Sutherland gave an overview of IVM chemical control, describing the different classifications of herbicides (selective, nonselective, contact, systemic, emergent, preemergent, etc.) and how each works. The type of chemical determines how and when it is applied. Basal treatments, for example, can be used any time of the year and are good treatments for low-stem-density areas.

When working with a chemical of any kind, Sutherland said, users should make sure to read and follow the label instructions (a com-

Dale Sutherland


Dick Helgesen

prehensive database of crop protection product labels is available online at www.cdms.net). "The label is the law…and it's a violation of federal law if you don't use it [the chemical] according to the label," he said. The label will also tell you what clothing to wear and offer other helpful information.

Biological control means using a plant's natural enemies, such as insects or pathogens, to control it. It is most often used in invasive plant/noxious weed control, Sutherland said. Cultural control is using desirable plants to compete with undesirable plants. As an example, Sutherland noted that biological control of purple loosestrife allows native species to re-colonize an area which, with the insects' help, holds out the loosestrife.

Following Sutherland, Two Harbors Airport manager **Dick Helgesen** engaged the audience with his comments on turf management. The red clay soil at Two Harbors is "tough stuff," he said. "When it's wet it's mushy and non-supportive of aircraft, and when it's dry it's like cement—and that's what we're trying to grow grass on."

When the airport was overhauled in 1991, Two Harbors staff, upon recommendation from consultant Short Elliott Hendrickson, worked in aggregate base with the topsoil, then reseeded and fertilized it. The result was a success, Helgesen said.

For maintenance of the turf strip at Two Harbors, staff mow about once a week, and fertilize the third week in June (using a 24-10-12 fertilizer with a broadcast spreader, mixed with a little seed, going down the middle of the turf runway).

Rain is one factor that is important for a good turf runway, Helgesen said, and "that's something we don't have much control over. You're not going to get a nice grassy cover without moisture."

Helgesen also reminded those in attendance that every airport is required to have a storm water permit and plan.

The Two Harbors airport also maintains three decorative gardens so that everyone flying into the airport sees one, he said. "Your airport is the front doorstep into your community," he said, and so it should give a good first impression with its appearance.

Concurrent Session 4B—Insurance and Liability


Ellen Longfellow

In this session, moderated by **Glenn Burke**, airport manager of the South St. Paul Airport, **Ellen Longfellow** provided information on the League of Minnesota Cities (LCM) and the various legal resources available to League members.

Longfellow, who is a loss control attorney with the LCM, agreed with previous presenters that having good policy is important for many reasons. "As lawyers, we recommend policies for everything. When I've gone to trial to defend a city, if city officials could describe and articulate why they did what they did and that their decision was based on policy developed five years ago, it's convincing to a jury or judge."

She went on to discuss the League of Minnesota Cities Insurance Trust (LMCIT)—specifically, the available coverage for small Minnesota airports that do not have scheduled air service. The LMCIT airport liability coverage—which is optional coverage—is part of a package and includes bodily injury, property damage, and personal injury as well as hangar keepers' liability, noise and vibration claims, and errors and omissions. "If you have coverage from another company, make sure you know what that coverage includes," she explained. "If you allow stunt airplanes at your airport, for example, and you don't have coverage for that, you better make sure someone else does, or you may be at a high potential risk for the city to have an uncovered accident, claim, or lawsuit."

Longfellow stressed the importance of also knowing the limits of the insurance coverage in order to understand what additional coverage is required from contractors. The LMCIT airport liability coverage is $1 million per occurrence, with an annual aggregate of $2 million for airports. "This means if you have multiple claims for your airport in a given year, LMCIT covers only a total of $2 million for the year," she said. Several activities are excluded from the LMCIT airport coverage including racing, stunting, and aerobat-

ics that are sponsored by the city or that the city participates in. Independent contractors, like the fixed-based operator (FBO), are not covered under the city's policy and therefore need their own insurance. "We recommend the contractors you hire take on the liability and agree to defend and indemnify the city," she added. "Your contracts should also indicate the type of insurance you require the contractor to have."

Simply having insurance is not enough, she explained. Contractors need to have the right insurance, including general liability, professional liability (if applicable), worker's compensation (if the contractor has employees), and both aircraft liability and premises liability. In addition, the city should be named as an additional insured on the contractor's or FBO's general liability policy.

General aviation airports often host a variety of special events, and in these cases Longfellow says it is important to figure out what the airport's role is to help determine liability. "When planning an event, be sure to follow any rules or standards…If there are none, do what's reasonable in terms of making the event as safe as possible. Be sure also to determine, prior to the event, whose insurance will cover the event," she said. "Finally, if there is some type of risky activity going on, ask the individuals involved to sign a waiver."

> **"We recommend the contractors you hire take on the liability and agree to defend and indemnify the city."**
>
> —Ellen Longfellow

General Session 5—Overview of the Brainerd Airport Construction Project

Steve Sievek, Brainerd Lakes Regional Airport manager, and **Andy Peek**, project engineer with Short Elliott Hendrickson Inc. (SEH), provided a brief overview of the Brainerd airport construction project in a session moderated by **Jim Grothaus**, director of technology transfer and training with CTS.

The project's beginning dates back to November 1993; from there, it took the next 10 years to finalize the environmental assessment and environmental impact statement process necessary to begin the airport overhaul, Sievek said. The pursuit of money began shortly thereafter, with construction officially beginning in summer 2003. "Fortunately, with the help of Congressman Oberstar and Mn/DOT's Department of Aeronautics, we were able to put the funding together for this project," Sievek recalled. "We are currently in the third and final phase of this project and are rapidly trying to wrap this up to get traffic back on Runway 05/23 before winter." Sievek said they hoped to have the runway and instrument approach back in operation by mid-November and return to normal service over the winter.

"With Runway 05/23, we had wind coverage only 89 percent of the time," Peek added. "We needed more capacity. When our expansion is complete, we'll have wind coverage for 99.1 percent of time."

Peek then walked participants through the beginning planning process up to the current project status. In addition to the environmental pieces Sievek previously described, a benefit-cost analysis was also required because the project would use both discretionary and entitlement dollars. The master plan was completed in 1990, with an update done in 2000. Because of the size of this project, Peek said, the FAA asked that it be done in phases over as many years as possible. Phase one grading began in 2003, and at that time was one of the largest earth-moving projects in Minnesota. Phase two paving began in 2004.

Forum participants toured the Brainerd Lakes Regional Airport construction site.

In the fall of 2002, the local community passed a bonding bill for $2.5 million. The construction costs alone for all three phases total $15.4 million. Land acquisition for the project totaled approximately $650,000 and came by way of various acquisitions that included county-forfeited land and purchased mineral rights. "We had to buy part of a gravel

pit as well as land that had homes on it. In the end, we acquired about 350 acres for this project," Peek said. "We moved nearly two million yards of dirt, and our wetland impact for this job was less than seven acres. During the grading operations, we balanced out our materials, meaning we didn't haul any in or take any away. The active gravel pit on site supplied many of the resources for this project." In balancing the site, Peek continued, they completed grading for a future runway extension on Runway 16 of an additional 600 feet.

When the project is complete, the airport will have two runways, each 6,500 feet long, and two category-one instrument landing systems—one on Runway 23 and one on Runway 34. The total airport acreage will be just less than 2,600 acres, which over the past five or six years has been enclosed with a 10-foot-tall deer fence.

In Peek's closing remarks, he offered thanks to the Brainerd community, Mn/DOT, and the FAA for their assistance in making the project happen.

General Session 6—Conversations with Jeff Hamiel

Jeff Hamiel

"I think NWA will successfully reorganize and come out of Chapter 11 in about two years."

—Jeff Hamiel

This year's forum again featured an interactive session with Metropolitan Airports Commission (MAC) executive director **Jeff Hamiel**.

Hamiel opened with a few words on the current financial situation both at Northwest Airlines (NWA) and within commercial aviation as a whole. Nearly two-and-a-half years ago, the MAC prepared a contingency plan on how it would handle an NWA labor strike, he said. So far, the plan has worked "as we scripted it." Hamiel went on to relay his thoughts on the current strike situation. "I think that AMFA (the Aircraft Mechanics Fraternal Association) is a broken union today…and I think that NWA is demonstrating to the industry that it can sustain an airline operation successfully and safely without bringing back the 4,400 mechanics that used to work there. I think they [NWA] will successfully reorganize and come out of Chapter 11 in about two years, " he continued. "It will not be a prolonged situation like we've seen at United Airlines."

Hamiel was referring to the fact that in February 2006, United Airlines will have been in bankruptcy for three years. "That is …bad public policy. When a company goes into Chapter 11 bankruptcy, they have a moral obligation to the rest of the industry to get back to leveling the playing field. They [United Airlines] have been taking unfair advantage of the air transportation industry, as has US Airways with their two bankruptcies, to the point that everyone else who wanted to avoid bankruptcy is being forced into it because they can't compete."

He segued into discussing the Pension Benefit Guaranty Corporation (PBGC), a U.S. government entity that is taking on pension obligations in the multiple billions of dollars. "Industries and companies all over the country are turning their pension obligations over to the federal government, a public bureaucracy, hoping that the government can help… [them] survive. What caused this? I think it was a lousy negotiation process," Hamiel asserted. "Companies negotiate contracts and compensation packages for employees that are not sustainable."

Another factor contributing to airline industry woes is the high price of fuel. "Southwest Airlines is paying half the price for fuel as everyone else," Hamiel said. "SWA had the financial wherewithal to hedge on fuel prices—not for one year—but for every year until 2012. They are set for the future, because someone did some thinking [several] years ago while the legacy carriers were busy negotiating unsustainable contracts."

Although Hamiel feels that the legacy airlines, in general, are in deep trouble, in the end, he predicts NWA will survive but will emerge from bankruptcy a different company, with low-cost, low-benefit employees to replace AMFA workers. "Already, NWA is running a more efficient operation than it was four or five years ago, which tells me that there was room for some cutting."

Hamiel then asked participants for their thoughts. **Brian Ryks** with the Duluth Airport Authority explained that the situation at NWA has cast some uncertainty over the

future of NWA's Duluth maintenance base. "NWA has moth-balled the maintenance facility since the strike began. We need answers from NWA; if they are not going to reopen the facility, then we want to get a separate maintenance or repair company in there to operate it."

Thor Einarson, president of Einarson Brothers Flying Service and manager of Falls International Airport, feels that NWA has always taken an adversarial stance with its regional airlines. "It's difficult to talk with NWA and get some straight answers to what their regional plans are. I'm very concerned about our future. NWA is behind on its payments to us…It's hard, when you watch the behavior of the NWA board of directors during these times…dumping hundreds of millions of dollars in stock and then looking for concessions [from unions and employees]….Many of us in this room have our hats hung on NWA. I'm all for helping them, but it's difficult to sit back and watch their behavior."

"I think NWA will come out of bankruptcy, but I am concerned about the out-state airports, specifically St. Cloud. We're served by Mesaba [Airlines]," **Bill Towle**, airport director at the St. Cloud Regional Airport, jumped in to say. "What if Mesaba goes away; does NWA have a plan? I've read that maybe NWA wants to run its own regional operation. So, do they even want the out-state airports? Do they need us?"

Matt Romanik, manager of the Grand Rapids/Itasca County Airport, responded, saying, "Our airport is trying to restore service with NWA, and their message to us is that they want people within 200 miles of the Twin Cities to drive to the Minneapolis/St. Paul International Airport to catch an NWA flight. They don't want to waste their resources collecting passengers 200 miles out."

The session then evolved into discussion about the state of general aviation today and where it is heading. Several attendees pointed out that while flight school numbers are down considerably, corporate aviation is on the rise. **Ray Rought**, with Mn/DOT's Office of Aeronautics, agreed, but clarified that enrollment at four-year aviation schools around the country is at capacity. "GA flight training is taking place," Rought explained, "but it's no longer being done primarily at an FBO." He added that airlines are hiring primarily pilots who have received their training and license from a four-year school.

Hamiel wrapped up by stating that the [aviation] industry has a long history of being cyclical. "We all depend on the airlines," he said. "They are essential to supporting the system that we all enjoy. When the legacy carriers figure out how to operate competitively, the industry will continue to grow over time….There always have been and always will be challenges; it's just the nature of the business we are in."

Brian Ryks

Ray Rought

"GA flight training is taking place, but it's no longer being done primarily at an FBO."

—Ray Rought

Concurrent Session 7A: Fall and Winter Runway Maintenance

Bob Milton, Mn/DOT Office of Aeronautics, began the session by noting how certain navigational aids (NAVAIDs) can be affected by winter weather conditions. For example, an ice storm could cause an anemometer to freeze solid; as a result, it wouldn't report any wind, but rather, calm conditions regardless of actual conditions. If that happens, Milton said, call the Aeronautics Office so it can disable the sensor until the anemometer is replaced or thawed.

The other thing to keep in mind is the visibility sensor, Milton said. It looks at about a cubic foot of air, "so that little bit of air sets the visibility for your entire airport." He related a story of how a cloud of snow kicked up by the airport's snow blower caused the sensor to report low visibility on an otherwise perfectly clear day.

In addition, if your airport has an access road to the weather station, keep it plowed, and make sure you have clear access to other NAVAIDS, Milton added.

Concerning the instrument landing systems (ILS), both the glide slope and localizer have critical areas that need to be maintained. If there is a lot of snow, it should be blown over the critical area so there are no ridges in it, Milton said. For the glide slope's critical area, the snow needs to be kept at 18" or below.


Jim Moriarty

> **"Pilots do not like surprises. You must give factual, accurate and timely surface condition reports."**
>
> —Jim Moriarty

Next, **John Schroeder**, lighting engineer with the Mn/DOT Office of Aeronautics, offered suggestions for maintaining runway lighting during the winter, noting that safety is the main concern. Those working on lighting should wear rubber boots to guard against electrocution, take steps to prevent frostbite, and avoid setting ladders on precarious or slippery surfaces.

Schroeder then covered preventive maintenance of various airport lighting: runway edge lights, the rotating beacon, windsocks, VASI and PAPI systems, runway edge lights (REILs), and guidance signs. For most all of these, you should inspect them thoroughly, address problems, and perform maintenance before winter sets in, he said. This includes replacing lamps (in the case of the beacon, gear noise often signals that it is about to go out) and applying anti-seize silicon-based grease where appropriate (e.g., on gears, threads). When snow is present, turn off the power on REILs before blowing and install location markers so they're visible.

Additionally, Schroeder recommended inspecting the PAPI power cable for proper slack. Frost may make it taut, which may damage or pull the PAPI out of alignment. Alternately, too much slack could get ground up in the snow blower.

Schroeder also cautioned that some servicing should be done only by an electrician, especially in the case of high-voltage REILs. Care should be taken to ensure power is off—and cannot be turned back on—while servicing them. "You usually only get one chance when you get across something that hot," Schroeder said. "REILs have a 2000-volt DC power supply inside....They have a bleed-down mechanism, but some don't work, so that's not foolproof."

Training is important, he added. Schroeder works with new airport managers and provides emergency repair, and he encouraged participants to contact the Mn/DOT Office of Aeronautics for assistance.

Following Schroeder, **Jim Moriarty**, a consultant with Peer Associates, discussed snow and ice control on runway pavement. He noted how critical it is to keep the winter runway clear and safe. If a city is promoting the local airport as a way to attract and encourage business in the community, "your goal at the airport is to provide a safe airport." Someone should inspect it every day and keep a field report on file, he said.

When offering some pointers to those new to the job of running an airport, Moriarty said in addition to keeping the landing and movement surface safe, they should remember that "Pilots do not like surprises. You must give factual, accurate, and timely surface condition reports. Timeliness is important for reporting."

All airports should have a snow plan on file that is regularly updated, such as when new equipment is purchased. "Take a look at yours when you get back home....The content must be factual, accurate, and above all, performed as stated," he said. He recommended consulting FAA Advisory Circular 15905200 (online at www.faa.gov) for additional help if needed.

Issuing timely NOTAMs and field condition reports is critical, Moriarty said. "If someone comes in and is surprised and you didn't issue a NOTAM...turn the lights out—the party is over. Somebody's going to pay."

Concurrent Session 7B—Your Airport's Economic Impact

At the 2004 AirTAP forum, University of Minnesota professor **Bill Gartner** introduced an interactive Web-based economic assessment tool that he and a team of University researchers, including **Dan Erkkila**, developed and then launched in 2005. The tool was created, with the assistance of Mn/DOT and CTS, to help users estimate the economic impact of an airport in Minnesota and then use that information to support requests for funding or specific improvement projects at that airport. This year, Erkkila, a professor with the University of Minnesota's North Central Research and Outreach Center, was on hand to offer forum participants a brief overview of the economics behind the tool as well as guidance and hands-on practice using it.

Erkkila recounted how the project began with researchers interviewing airport person-

nel across Minnesota. "We asked questions about the type of economic activity at the airports to try to get a sense of all the ways, directly or indirectly, money changes hands related to airport activities," he said. The team also pulled economic impact information from county databases and models, so it's important to keep in mind that the database behind the tool is based on county-level multipliers that relate the economic activity entered into the calculator to a particular county, he said.

In terms of economic activity output, economists generally talk about gross output, which is the local equivalent of the gross national product in that it is the dollar spending in a community, Erkkila said. Gross output also includes the jobs created in a community. These two pieces make up the economic activity output. The total economic impact in a community is made up of both direct and indirect impacts and induced effects. The direct impact is the direct exchange of money; the indirect impacts are the backward linkages in the production of a particular good and are what fuel the community's economy. Finally, the induced effects include all the businesses in the community relating to the airport that generate salaries. "People earn an income, and then sell and buy things in the marketplace, which continues to fuel the economy," Erkkila said. "It's important to understand these impacts to fully understand the gross output, which is the sum total of the direct, indirect, and induced impacts. It's all of the economic activity related to the numbers you put into the calculator."

Participants next separated into groups, each with a computer and Internet connection that enabled them to pull up the calculator on the Mn/DOT Web site (www.dot.state.mm.us/aero). The groups practiced using the tool, and Erkkila showed them how to run different scenarios by changing certain variables. Users can create a printable report, based on the information put into the calculator, that provides a variety of analyses. These include the total economic impact of the activity county-wide and the number of jobs related to the economic activity of that airport.

Erkkila suggested that users incorporate the AirTAP toolkit materials with the reports generated to tell the complete economic story of their airport and community. "You don't want to just dump numbers on your city council's desk. You need to explain the connections your airport has in the community and communicate that story."

"You don't want to just dump numbers on your city council's desk. You need to explain the connections your airport has in the community and communicate that story."

—Dan Erkkila

Speaker Dan Erkkila walked participants through the airport economic impact tool.

General Session 8—You Ask the Questions: FAA and Mn/DOT Provide the Answers

Through federal legislation over the years, various grants-in-aid programs have been established to develop and maintain a system of public airports throughout the United States. The most recent legislation, Vision 100—Century of Aviation Reauthorization Act (Vision 100), was signed into law in December 2003. A major component of the bill is the Airport Improvement Plan (AIP) program, which provides funding for airport rehabilitation and development projects. For eligible general aviation airports, Vision 100 provides up to $150,000 of non-primary entitlement funds each year through the AIP. In this session, **Bob Huber**, assistant manager with the FAA Minneapolis Airports District, discussed the grant eligibility guidelines and steps airport operators should follow when applying.

According to Huber, property acquisition, airfield improvements, aprons, perimeter service roads, and access road improvements are examples of eligible items. Historically, revenue-generating items have not been eligible for federal funding; Vision 100, however, makes funding available for AIP-eligible revenue-generating developments such as hangars and fuel facilities, provided that all airside needs at the airport are met. The airport

must also have a financial plan for funding these airside needs.

Huber clarified that the intent of the provision is to enable airports to build new hangars only and does not allow an airport to upgrade or buy existing facilities. In addition, the new hangar must be owned by the airport and must be a public-use facility; corporate hangers are not eligible for these funds. Like hangars, fuel facilities, not including fuel trucks, must also be airport-owned, public-use facilities to meet AIP eligibility requirements.

Participants were grouped by region to review CIP request forms.

Airport operators must submit specific information before the FAA will approve AIP funding. Submission items include a completed Revenue-Generating Facility Eligibility Evaluation Form; a statement on airside development needs and a financial plan; the project description with drawings; and the business plan for the proposed facility. Insufficient or incomplete documentation may require additional information from the sponsor or may result in a determination that the proposed project is ineligible for AIP funding, Huber said. He also explained that other items might qualify for non-primary entitlement funds, such as electrical, water, and sewer service from the point where they exclusively serve eligible facilities at the airport. Snow removal equipment (SRE) buildings are eligible to the extent that the buildings house equipment that is normally AIP-eligible. Within GA terminal buildings, Huber added, public seating areas, pilot briefing rooms, and reasonably sized conference rooms would also be eligible. However, an airport manager's office or pilot sleeping room would not qualify.

In the last part of the session, participants separated into groups for discussions led by Mn/DOT regional engineers. During this round-robin session, participants reviewed parts of the Capital Improvement Program (CIP) request form and received tips on how to complete it properly. The groups also discussed pavement maintenance and rating issues and reviewed the variety of GA-related resources available from Mn/DOT and AirTAP. In addition, this informal session allowed time for participants to ask specific questions of their particular regional engineer.

General Session 9—Inside the Fence: Runway Safety Issues

The FAA flight service station (FSS) system is the only official source for aviation weather and as such, is an essential general aviation service. However, the system is in a state of decline and disrepair, relying on obsolete 1970s technology that no longer meets today's operational requirements. Thus, on February 1, 2005, the FAA awarded a contract for the services provided by the nation's 58 automated flight service stations (AFSSs) to the Lockheed Martin Corporation, which then assumed responsibility for providing flight services in October 2005. **Joe Morgan** provided additional details on the transition in a session moderated by **Bill Towle**, director of the St. Cloud Regional Airport.

Morgan, manager of the FSS in Princeton, Minn., explained that Lockheed Martin will continue to provide AFSS preflight, in-flight, and operational services on a 24–7 basis. The company will also provide special services such as supporting aviation-related education and outreach programs.

During the initial stages of the transition phase, estimated to take approximately 18 months, Lockheed Martin will use existing FAA facilities and equipment and will not require any changes to the FAA National Airspace System (NAS). After completing all required NAS interface tests, Lockheed Martin will transition from the FAA legacy equipment to Lockheed Martin's flight services system, called Flight Services 21 (FS21), and consolidate AFSS facilities by reducing the number of stations from 58 to 20. FS21 will be a fully integrated nationwide network that gives all flight service specialists and pilots access to flight plan information from a single, common database.

Morgan said that the transition should be

transparent to customers and result in improved service nationally.

Following Morgan's discussion, **Joe Harris**, airport manager for MAC Reliever Airports, shared some of the low-cost strategies Flying Cloud Airport recently implemented to improve runway safety. Flying Cloud is the second busiest airport in the state, and in 2002 earned a reputation as the most dangerous, having had the most runway incursions (per 100,000 operations) of any airport in the country. "FAA representatives rushed to help us figure out what the problem was," Harris said. "We preferred to deal with it at a local level, though, to see what we could do to remedy the problem."

On any given day, Flying Cloud sees a diverse range of traffic. With such a variety of users, Harris said it was clear that fixing the problems would take a team approach involving everyone from airport management, air traffic controllers, and flight standards district office (FSDO) personnel to the airport operators and businesses, the local aviation community, and all pilots.

The first step for Harris and his team was to investigate what was causing the problems: was it the tower, the pilots, the tug and tow operators, the fuel trucks? "We found that all of these groups contributed a little something to the problem," Harris explained. "Even the most experienced pilots, tower controllers, and vehicle drivers can make mistakes, especially if they are fatigued or otherwise distracted," he continued. It was also evident that in most cases, the regular, local pilots were not causing problems; rather, most issues stemmed from transient pilots who were not as familiar with the airport and its operating environment.

Upon further investigation, the team also realized that airport signage was sparse and non-standard. "For as busy as we were, we had very few guidance signs, and the pavement paint was faded and cracked," Harris said. "We now paint the airport every year during the fall so the markings still seem fresh in the spring." Staff also put up lighted signs and painted the signage on the end of the runway to better direct traffic, Harris said.

To spread the word about the airport's issues and its efforts to remedy the problems, the team hosted user meetings and enlisted help from the FSDO. In addition, Flying Cloud implemented a driver-training program for anyone who crosses a runway as part of his or her job.

Harris admitted that the number of runway incursions at Flying Cloud airport had been a serious issue. Although the team dealt with the problems in a serious manner, the solutions deployed were simple and inexpensive. As a result, Flying Cloud Airport has not had any incidences in the past three years.

In the final portion of this session, **Rick Braunig**, aviation representative with the Mn/DOT Office of Aeronautics, touched on a variety of runway safety issues. He first addressed those surrounding runways and agricultural operations. "When you have crops and farm equipment in the runway environment, you have the potential for safety issues," he said. "One of the ways we deal with the situation is to establish a policy on agricultural operations that includes some common sense things about operating on the airport."

He next described the criteria generally used to establish a no-wind runway, explaining that these are normally the longest runways, the ones closest to the ramp, and the ones with the best instrument approach. "No-wind runways are the preferred runway to use when winds are light and calm, but to be effective, you need to publish these in various directories and other appropriate materials," Braunig said.

With regard to multiple runway operations, Braunig stated simply that he doesn't like to see aircraft operating on crossing runways. "It reminds me of the game of musical chairs when both players try to sit down on one chair at the same time," he said.

Next, he displayed a runway diagram that showed a situation where pilots on the ends of two different runways would not be able to see each other. In such cases, Braunig said, a no-wind runway would be helpful, as would reminding pilots to keep an eye out for airplanes on the other runway and requiring pilots to announce their intentions over the radio.

Braunig offered a few final thoughts with regard to some of the unusual operations at airports including helicopters and ultralights. "The basic advisory rules [for helicopters] say to avoid the flow of fixed-wing traffic, but the

Rick Braunig

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question for you as airport operators is, do you want a helicopter landing area or do you want a helicopter parking area? If you want a helicopter landing area, you need to treat that just like a runway in that you have to 'airspace' it and provide approach corridors. You might be able to accomplish the same things with a helicopter parking area."

Although ultralight operations are allowed at most airports in Minnesota, if airport operators are able to show that operating these airplanes at a particular airport poses a safety risk, the operator can restrict the planes. "You can also set minimum standards for ultralight pilots to operate on your airport," Braunig added. "Ask these pilots to go for an hour flight with a local flight instructor so they understand what's going on with the certificated aircraft and they understand the traffic pattern for ultralights."

Final Wrap-Up and Evaluations

At the end of the forum, Cheri Marti asked for participant feedback on how the conference went. Attendees responded favorably and indicated the event format, location, length, and assortment of topics worked well. Audience members also provided useful tips for improving the forum. One participant suggested this for the future: "When we talk about things that affect FBOs and pilots, we should invite them to attend. Maybe even have a group of pilots present a session. It would be healthy to round out the perspectives."

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