AIRTAP *Briefings*

Keeping your airport safe, open, and accessible this winter

Airport snow removal is a critical winter operation in Minnesota. To ensure effective and efficient snow removal, airports should create and implement a plan and train staff who will play a role in carrying it out—before the snow flies.

Creating a snow plan

Your pre-season planning should begin with developing or updating your snow removal plan—a step-by-step document outlining how winter operations will proceed. This plan should include timelines, plowing guidelines and techniques, equipment and materials to be used, contact information, procedures for closing runways, and staff assignments and responsibilities. It should also identify a snow disposal site on the airport, state how team members will be notified when a snow event occurs, and name the member(s) of the removal team who can make decisions, reduce response time, and maximize the availability of runways and taxiways.

FAA Advisory Circular 150/5200-30A, *Airport Winter Safety and Operations*, provides guidance to prepare for the winter snow removal season. (Advisory circulars can be found on the FAA website at www.faa.gov.)

Consider the following when developing a snow removal plan:

- Are we materially prepared and adequately budgeted for the new winter season?
- Where will we store the snow?
- Who will close the runway and issue the NOTAM? What are the closure procedures for the runway and other paved areas used by airplanes?
- Did we address all unique airport site conditions?
- Are we adequately staffed with qualified personnel?
- Do we have a continuous training program and do we document our training activities?
- Do we have good weather forecasting methods that give us accurate and timely information?
- What processes are needed to revise the steps we take for continuously monitoring the runway(s)?
- How do we ensure markings, signs, and lighting systems are legible and visible after clearing operations? Are touchdown markings addressed in our procedures?
- What are our procedures in case of airfield accidents involving snow clearing crews, airplanes, or other airport vehicles?
- What is our plan for identifying the need for post-season improvements?

A snow removal plan should also include a map of the airport that shows required access for both planes and automobiles; a prioritized list of areas to be cleared of snow, and in what order; and a map showing boundaries and hold lines for airplane operating areas.

Be sure to make copies of the plan for all snow removal staff.

Preparing for snow

Many airports have formal or informal agreements with the local city or county for snow removal. Bring maintenance staff to the airport to discuss snow removal and the airport's plan before the weather changes so they are well informed about airport and runway boundaries, safe operating procedures, and imaginary surfaces.

Once your plan is developed but before it snows:

- Train personnel in equipment operations; communication techniques and terminology; markings, lighting, and signs; and the airport layout.
- Make practice runs with the equipment in typical operational scenarios before allowing access to the movement areas.
- When training staff, remind them that the visibility from inside their truck may be very different than the

An airport's story: Aitkin and Pine River

In its annual session spotlighting local general aviation (GA) airports, this year's Fall Forum featured two northern Minnesota airports, Aitkin and Pine River.

Jake Carlson is co-owner with her husband of the fixed-based operation Aitkin Aviation at Aitkin Municipal Airport. The airport is two-thirds owned by Aitkin County and one-third by the city. The city clerk serves as the manager, but the Carlsons contract with the airport commission as field managers, taking care of mowing, snow plowing, and general upkeep of the airport.

The Aitkin airport is named Kurtz Field after Steve Kurtz, a long-time flight instructor with the airport. Runway 16/34 is a 4,000-ft. paved runway without a taxiway; the east-west runway is a 3,200-ft. grass strip with a taxiway. The airport also has a campsite for use by pilots.

As the GA pilot population ages, Carlson sees a need to involve more young people in flying and aviation. She notes that the local chapter of the Young Eagles program (a program of the Experimental Aircraft Association that introduces children to flying) has flown almost 2,000 Aitkin-area children. "It's so much fun to see the kids on their first flight," she says. "Maybe taking [them] up on a half-hour ride will get them interested."

The Aitkin airport's major annual event is a fly-in and classic car show held the last Sunday in June, during which the airport serves about 2,000 meals featuring wild rice, Aitkin's cash crop. The event, Carlson says, is a way to keep the community involved with the airport in a positive way.

Recent rezoning at the airport raised concerns in the community about how land was being used, Carlson says. When someone made a comment after a public hearing questioning the need for the airport, Carlson fired off a letter to the editor in the local paper describing the many economic benefits the airport has on the community. Three or four businesses wouldn't exist in Aitkin if not for the airport, and services such as LifeLink couldn't operate, she noted.

Following Carlson, Gary Gardiner talked about Pine River Municipal Airport. Similar to Aitkin, the Pine

Local aviation show takes off

Aviation enthusiasts can tune in to a Minnesota-produced TV show covering topics related to aviation in the air and on the ground. The Flightline TV highlights aviation stories, aircraft, and events around the Midwest in high-definition during 30-minute episodes. The Flightline TV show is broadcast in Minnesota, Wisconsin, Iowa, and the Dakotas on FOX Sports North and FOX Sports Wisconsin. Episodes are also available online and on DVD. Visit www.theflightline.tv to learn more.

visibility from the air or from a landing plane. In addition, the noise level inside a snowplow may be high, so instruct operators in using the radio effectively in non-optimal conditions.

- Plan for snow storage when developing airport improvement projects such as parking lots and aprons.
- Write into your leases the areas that the airport will clear and the areas that each hangar tenant is expected to clear around private and public hangars.
- Meet with local pilots, hangar tenants, airport users, and fixed-based operators (FBOs) as well as emergency aircraft operators that use the airport (e.g., medical helicopters) to discuss your strategy for winter operations.

Snow removal strategies

Once the snow arrives, consider the following strategies for safely and efficiently removing it:

- Make radios readily available to plow operators and educate them on required and proper radio communications with pilots. Instruct plow operators to give aircraft the right-of-way at all times.
- Remind operators to allow for additional stopping distance near planes and wings that extend far beyond the plane.
- Issue a NOTAM when more than one inch of snow will fall on the runway. Always check to make sure your

NOTAMs are posted before plowing and are removed after the event.

- When removing snow around lights, tell pilots and airport users that operators are on the airfield. If you see an aircraft circling to land and the runway is usable, leave the runway while it lands and then return to your work.
- Remember that the sides and ends of the runway must be cleared of snow. Pilots need to see the runway lights from the air, and snow banks should be far enough back to provide plenty of wingtip clearance. Never pile snow off the ends of the runway; push it to the sides beyond the runway ends. Finally, remember to clear more than just the main runway or you leave pilots with no way to move off of it. Plow the main runway first, followed by the taxiways, aircraft loading areas, public roadways, secondary runways and taxiways, hangar taxi lanes, and vehicle parking areas.
- Plowing around lights and navigational aids is extremely important. Clear the sensors on the automated weather observing station and provide access to the beacon and other NAVAIDs for maintenance and visibility. Use caution, since lights are mounted to break away when hit and the force of snow being pushed by a plow can easily dislodge them. Check NAVAIDs and light couplings after plowing to ensure they were not damaged.

River airport is owned by the city and managed by the city clerk. Gardiner, who is also a pilot, heads the airport commission, which he has served on since 1999. The commission had stopped being active until Gardiner and others at the airport revived it.

The airport's one runway is paved, but a turf crosswind runway is in the planning stages, Gardiner says. The airport began as a grass strip with several open T-hangars at another location. It was relocated in 1980, after a real estate developer acquired the airport's land. The city moved the airport to a grass strip on the other side of town, Gardiner explains. The runway was paved around 1990 and the number of visitors and

Hangars at the Pine River Airport

users grew markedly. "We were getting an influx of visitors to the Whitefish chain of lakes," Gardiner says. "We were convenient—[visitors] didn't have to go into Brainerd." The airport currently has 45 hangars with at least one airplane in each.

Most of Pine River's users, if not local, fly into the airport from Midwest locations such as Nebraska, Illinois, Iowa, Kansas, and Colorado; the average range is from around 150 to 400 miles, with a few more distant users, Gardiner says.

Similar to the situation in Aitkin, Gardiner says some Pine River residents don't realize how the airport contributes to the local economy. Gardiner credits the economic impact calculator, developed by the University of Minnesota and available on the AirTAP website, as a helpful tool for generating numbers to educate the community.

And when it comes to the community, "The key is promoting things," he says. "You have to get out and talk…and get [people] involved."

Tips for plow drivers

- Know the airport and its boundaries, particularly the location of taxiways and runways, since some signs may be covered with snow.
- Check NOTAMs to ensure the runway has been closed before moving onto it for plowing.
- Listen to the radio carefully and communicate your movements clearly.
- Read back any communications from pilots.

- Note required clearances indicated on snow removal maps.
- Maintain situational awareness.
- Admit it when you're lost.
- Understand signs, lighting, and markings.
- Never assume anything.
- Take extra care due to low-visibility conditions during winter operations.

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