

Winter, 2007

Airport Strikes a Blow at Mother Nature

By Chris Hart—flymissoula.com

Missoula is a pretty nice place to live. We have good schools, great fishing, skiing, and snowmobiling, big-name concerts, a professional baseball team, and of course, the University of Montana Grizzlies. Unfortunately, Missoula has two major drawbacks: Reserve Street, and relentless fog during the winter months. While the Airport really is not in a position to fix the gridlock on Montana's most congested highway, they recently discovered they are in a position to do something about the weather.



Northwest Airlines Airbus A319 in MSO fog.

Chris Hart photo

The idea of cloud seeding is really nothing new. The first attempt occurred in Massachusetts in 1946 when a plane seeded a cloud with crushed dry ice, resulting in snow falling out of the

cloud. Today, cloud seeding is used to increase precipitation in areas experiencing drought, to induce snowfall at major ski resorts, and even to reduce the amount of fog in and around airports.

Enter the "fog-buster", a system the Missoula Airport acquired following a particularly disastrous 2005 Thanksgiving holiday travel period. During this time, 69 Missoula flights were either cancelled or diverted due to fog and limited visibility, forcing thousands of disgruntled holiday travelers to endure a bus trip to

other nearby cities to catch their flights.

This year, the Airport came armed for battle. Using a small

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Progress and Concerns for MSO Pilots

By Paul Stafford

Well, it sure seems like spring is here, and none too soon. I have been obsessing about day length for a few weeks now. There is some good news to report. Cris Jensen has been successful in getting the FAA and NWS to cooperate in installing a switch (soon, not done yet) to allow the ASOS to be broadcast on the ATIS frequency after hours. Imagine, two US government agencies working together...

We are within weeks of having an approved Primary Guiding Document revision. This will allow (finally) GA to begin building hangars. Thanks to Gary, Hank, Steve and others who attended the review meetings and gave the Commission GA input. And thanks for your patience; it only took 15 months.

Speaking about government agencies, I am going to use my soapbox to talk about the 2007 FAA re-authorization bill and user fees. Hopefully, you all have read about this in the AOPA magazine or other places. **This is a real threat to GA.** Abandoning the effective and cheap-to-administer fuel tax (which for years has maintained a multi-billion dollar surplus) for a pay-as-you-go fee for every conceivable service (weather briefing, ATC, instrument approaches, flight following, or even taking an airman test) is a bad idea.

The airlines love the idea, and the FAA does too, because it will remove their funding from congressional oversight. We should fight it tooth and nail, because it will raise the cost of flying immensely, and negatively impact safety. Imagine how many people will eschew practice approaches because each one

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Taxiway Golf

By Steve Rossiter

I live on the hill over looking the Missoula Airport (MSO). It has always been interesting to me that so many pilots, including professional turbine multi-engine pilots operating from MSO, choose to use Taxiway Golf as the starting point for their take off on both Runways 11 and 29. Is there sufficient runway in both directions for most general aviation airplanes to takeoff? Of course there is. Is it a good idea to only use half the runway? We each have our own opinion and I think this is an excellent opportunity for discussion.

When I've talked to pilots about intersection departures, not just in Missoula, I hear rationales such as "it is faster" or "it costs less to taxi the shorter distance" or "it's not unsafe" or "I operate from shorter runways all the time." All of these observations are absolutely true. Why then discuss them?

Having been a professional pilot for 40 years and a flight instructor for 39 years, I've sat around "hangar flying" with lots of pilots, most of whom were professional pilots, and the consensus I've observed is that, as a rule, intersection departures are not considered a good idea. Say what?

My main concern is safety. It's a fact that it isn't as safe to depart from an intersection as it is to depart using the full length of the runway. The operative term, here, is "as safe." Consider this situation:

You accept a departure from Taxiway Golf on Runway 29 at MSO. From Taxiway Golf you have 3950 feet of runway available, more than enough runway for your airplane. When you

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Fog (Continued from page 1)

fleet of vehicles driven up and down the runways by Field Maintenance crews, Carbon Dioxide gas, a naturally occurring and harmless substance in the environment, is sprayed at minus 100 degrees Celsius into the fog, starting a chain reaction process where super cooled water droplets, which make up fog, freeze into ice crystals. These crystals grow larger as they attract more water droplets like a magnet, until eventually; the crystal becomes too heavy to support its own weight. The result? The ice crystals begin to fall out of the sky as snow, the fog breaks down, and if everything works as planned, the sun comes out.

That very scenario played out during the first test in November, when visibility at MSO was reported to be ¼ mile, well below the half-mile of visibility required to begin an ILS approach to Missoula. Several cargo flights and airlines holding over the Airport were preparing to proceed to their alternate destinations; however after an hour of fog seeding with the new system, visibility dramatically improved to over 6,500 feet. "There's a big hole at the touchdown zone, looks good!"

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costs \$25? Or skip a weather briefing because you checked www.weather.com already (of course no icing or winds aloft info there!).

If you have had the "pleasure" of flying in other parts of the world, you know that fees mount quickly and unexpectedly. The Canadian system originally started out claiming it would have little to no effect, and its fees have continued to grow and encompass more services. The European fee structure is outrageous, and essentially eliminates inexpensive sport flying as we know it in this country. Also, these other systems can function only because they handle very little traffic. US flying comprises 50% of all flights in the world. The present system has helped GA flourish, and works well.

Lastly (then I'll get off my soapbox), the FAA has not proven it is a good accountant. It did not pass its last audit, and the DOT IG and GAO have both testified in the past regarding FAA fiscal negligence. This system will leave them unfettered to set and spend fees without oversight or justification, as they see fit. So—without delay, please email or call your congressman to let them know how you feel.

Paul Stafford is Chair of the Airport Board of Commissioners GA Committee

reported the crew of a cargo flight circling overhead. The fog continued to dissipate as the sun came out, followed by the first cargo flight touching down at 9:27AM. In short, the system was a resounding success.

Wait a minute! It was foggy last week, and the week before. Where was the fog-buster then, you may ask? The system is only proven to work on cold fog with air temperatures below 28 degrees Fahrenheit. At or below these temperatures, water vapor is able to evaporate from super-cooled fog droplets and deposit themselves onto ice crystals until they become heavy enough to fall out of the sky. The system simply doesn't work on the more stable warm fog. In addition, the cloud seeding system is most effective when there is a light wind in the area.

While the battle has not been won, Missoula International Airport definitely gave Mother Nature a black eye a few times this winter. As for that traffic on Reserve Street, it's ironic that it now appears easier to manipulate the weather than it is to fix Missoula's ever increasing traffic congestion.

(Golf, continued from page 1)

get about 3000 feet down the runway (either flying or you may still be on the ground) you have a problem and you need to be back on the ground and stopped. It so happens that you are extremely proficient and you are able to get your airplane down and stopped only overrunning the end of the runway by a few hundred feet. Oh, yeah, and you ran through the first couple of sets of approach lights.

The same situation from the full length of the runway is a major non-event. How silly would you feel after experiencing a slight over run after you made the choice not to use the full length of the runway? Personally, I would be really, really humiliated. And I know folks that might never let me forget it.

It is unquestionably safer to depart from full length than it is from an intersection. You will never know if you need the extra distance of the full length of the runway until you actually do. Is your crystal ball good enough to know when that might be? Mine isn't. Please remember:

"There is nothing more useless to a pilot than the runway behind him, the air above him, and the fuel left in the fuel truck."

There is nothing more useless to a pilot than the runway behind him, the air above him, and the fuel left in the fuel truck.

I'll always opt for the full length of the runway for take off except on the rare occasion when air traffic control requests the use of an intersection. In those cases, I am aware of and accept the higher level of risk associated with complying with their requests. Whenever you make the choice for an intersection takeoff, please acknowledge to yourself that you are accepting a higher than necessary level of risk.

Steve Rossiter completed the University of Southern California Aviation Safety Program and is an ATP and CFII in airplanes and helicopters. He is the President of Missoula's EAA Chapter 517, and is an aircraft broker and appraiser.

Aviation Youth Academy

Summer, 2007

EAA will once again offer two weeklong sessions for children ages 10-13.

Session 1 will be July 9-13

Session 2 will be July 16-20.

On the last day of the Academy, each child will be given a complimentary airplane flight by an EAA member.

More information is available at www.eaa517.org

On Using PFC's to Undo PFC

By Hank Butzel

The porous friction coarse (PFC) surface of Runway 11/29 is showing signs of deterioration causing a potential Foreign Object Damage (FOD) issue. So, a rehab project has been planned for late this summer (RPPFLTS).

I attended a Feb. 1 stakeholder meeting convened by Airport Manager Cris Jensen so primary users could gain consensus on the best course of action for construction closures. Airport management had previously determined that the best time frame is immediately following Labor Day due to an historical reduction in emplanements, fire season's slowing, and wx conditions still being realistic for the project.

Meeting attendees included reps from the airlines, Forest Service, Neptune, ATC, and several folks from the Denver-based engineering firm of CH2M Hill. Cris, with his typical sense of humor, informed the group that everyone would be locked in the room until an agreement was reached. The project will require a minimum of nine working days. There were four options for type and scheduling of the closures and a fifth option to not proceed but delay the work for another five years. This option was unanimously rejected because delaying the needed maintenance would cause a much longer closure in the future for more intensive work.

Surprisingly, within an hour a decision had been made to use a "rolling closure". This will consist of 3 days on and 3 days off for 3 cycles. The schedule will be:

Aug 27 close at 8pm · Aug 31 open at 6am · Sept 4 close at 8pm
Sept 7 open at 6am · Sept 10 close at 8pm · Sept 14 open at 6am

GA Hangars Coming to MSO

By Gary Matson

Interest in new GA hangar construction at MSO first became acute early in the year 2005, when rumors began circulating that the hangars east of Minuteman were going to be replaced by new parking facilities for the Airport's commercial aviation travelers. Concerned pilots met with the Airport Board and requested its attention to the need for new hangars. An August, 2005 postcard survey of Missoula area GA pilots showed strong support for more hangars: 78 replied to the survey; 65 expressed a need for more GA hangars at the Airport.

In the fall of 2005 a loosely organized "Steering Committee" of Missoula GA pilots began meeting with Airport Board and Staff to revise documents and policies that were hampering hangar building at MSO. Cris Jensen had just started as Airport Director and two active GA pilots, Paul Stafford and Dr. Steve Powell, had just begun service on the Airport Board.

Working together in a friendly, cooperative environment, the

There will be an additional 6 night closures needed in mid Oct. to accommodate grooving operations. Runway 7/25 will remain open during the construction cycles but with the necessary intermittent short term closures. The ILS and VASI will be operational during hours of airport ops and there should be no need for displaced thresholds.

Airport maintenance of this nature is normally scheduled at the discretion of airport management. One of the airline folks at the meeting commented that Cris deserved a 'thank-you' for accommodating everyone by seeking input. Cris says the new runway surface will be a dense mix grooved asphalt type that should provide for a 20 year service life. The cost is 3-4 million; 95% paid by the FAA with the remaining 5% coming from Passenger Facility Charges (PFC's).

I learned a particularly pleasing bit of news after the meeting by listening in on a conversation between Dennis Chudy, Airport Operations Supervisor, and one of the engineers. A large amount of fill will be needed for the road to the new localizer. This 'borrow material' could be taken from sites of future GA taxiway sites accessing Golf Taxiway. The excavated sites could then be backfilled with up to 5,000 cu. yards of millings from the old PFC surface. The result would be a cost effective first step in preparing for taxiways in the proposed GA development area. How good it would be to see progress helping to advance the much anticipated goal of GA hangar building! I asked Cris about this use of the millings and he said it's not final but being given serious consideration.

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parties first evaluated the GA Hangar Lease Agreement. They revised the agreement, substituting terms less restrictive and more affordable for hangar owners. The Board approved the agreement, which is now ready for use. Next, the cooperating parties tackled the Primary Guiding Documents to make them compatible with the lease agreement. That task has almost been completed, but will not be final until Board approval in either February or March of this year.

My gosh... it could take more than two years to enable hangar building at MSO! Why the heck is that?! Part of the answer is in the process: It just takes a long time to evaluate and edit documents, include participation of the three Board Committees with related responsibilities, and

then get final Approval from the full Board.

What remains to be done? Well, the Airport and pilots share an interest in having MSO hangars be a quality addition to the Airport environment. Appearance and functionality matter, not only now but also in the future. Where and how would a GA

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Aviation Science at MSO

By Don Morton

A major scientific study is being conducted right here at Missoula International Airport. Chief Investigator David Driscoll, a senior at Big Sky High School is studying the effects of spatial disorientation on pilot performance as part of a research class and as a project for a series of science fairs. Driscoll, himself a Private Pilot since June 2006, hypothesizes that performance on instrument maneuvers will deteriorate significantly after a bout with spatial disorientation.



Dave Driscoll photo

Don Morton (left) mentored David Driscoll (right) for the SD study. David's flight instruction was in Minuteman's N-93239 with instructor Clint Cotton.

(Hangars, continued from page 3)

camping area work best, a pilot gathering place, a BBQ and picnic spot? How many of each building type will satisfy the demand for corporate hangars, stand alone, and T-hangars? These elements need to be included in an "Airport Master Plan", which the Airport Board and Staff are going to develop.

To accompany the Master Plan, the Airport should put in place land reserve and other policies that will ensure continuing opportunities for private hangar ownership. Otherwise, available land could be taken by builders of rental hangars. Rentals will likely be an important part of the hangar mix. The Airport should consider limiting rents to ensure that tenants are charged a fair amount. Along with the Master Plan, another essential is the *funding and location of infrastructure*, including taxiways and utilities.

How soon can hangar building begin? Optimistically, this 2007 construction season; pessimistically, the 2008 construction season. It depends upon how soon the Airport Master Plan and infrastructure arrangements can be completed. Meanwhile, there are things the GA pilot can be thinking about, looking forward to the time "soon" when we'll finally all come together to plan for hangar building with a full understanding of the costs involved and the options available:

- T-hangar?
- Stand-alone building?
- Own or rent?
- Share a hangar with others?

The removal or location of present GA hangars, which is what kicked off the urgency to the GA hangar building issue, won't happen for another 2-5 years. So, we've got some time to work with. Stay tuned!



To test the hypothesis, the original experiment design involved taking pilots up into the air to perform instrument maneuvers before and after spatial disorientation. The test pilots would sit in the right seat, Don Morton would serve as PIC, and Dave Driscoll would sit in the back directing and evaluating the experiments. Pilots would perform a series of simple maneuvers under the hood, then Morton would attempt to induce SD with a simple graveyard spiral maneuver. The test subjects would then sequence through another set of simple maneuvers while Driscoll would evaluate performance before and after SD. With the help of Kaye Ebelt the aerial experiment was tested and plans were set to test ten to twenty pilots.

Unfortunately, the reality of bringing rental airplanes, science team schedules, test pilot schedules and good weather all to convergence in a single point in space and time proved to be impossible, and after several months of trying the initial plan was abandoned. Minuteman Aviation graciously stepped in and offered the use of their PC Flight Simulator for the experiment. The use of the simulator provided greater scheduling flexibility and the potential to recruit pilots just "hanging out" at the facility. The experimental design remained similar to the original plan – test subjects performed a series of simple maneuvers, SD was induced through the use of a spinning office chair, then another series of maneuvers was performed. If you doubt the ability to induce SD in an office chair try this – sit on a swivel chair with your head tucked down and turned to the side, with eyes closed; have someone spin the chair at approximately 30 rpm for about 45 seconds, then have them stop abruptly. One test subject almost fell over after this exercise!

Despite the improved experimental conditions offered by Minuteman Aviation, test pilot participation was quite low and, to date, only six subjects have been tested. Nevertheless, Driscoll is in the process of statistically analyzing the results and will be presenting his conclusions at science fairs in SLC, BTM and MSO.

Don Morton is a Missoula Private Pilot, and an Associate Professor, UM Dept of Computer Science



Fly the Big Sky license plates are now available through regular county motor vehicle licensing departments. For each license purchased, EAA Chapter 517 receives \$20 to further its activities promoting aviation. The additional cost for the specialty plate with standard numbers is about \$30, and for the personalized plate about \$60. Plates can be ordered at any time without affecting the renewal cycle. Standard renewal rates apply, with the specialty plate cost being added.

THE ART OF FLYING

By Art Dykstra

The ink is just barely dry on your Pilot Certificate so the next logical question is, "What airplane should I buy?" After a quick and confusing poll of the local Airport Bums, you find the choices become overwhelming. Do you buy high wing, low wing, new, old, 4 place, 6 place, tail wheel, carbureted, fuel injected, It never seems to end!

So, to try and make some sense of this madness, take a deep breath, find your happy place, and let's start with two very fundamental questions. "How much", and "How many"?

HOW MUCH? If cost were not a factor, we would all be commuting to work in new Gulfstream V's. I can scratch that one off my list, at least for

now. So, let's take a good look at cost. Keep in mind that while the purchase price of the airplane is a big concern, you need to consider operating cost, hangar, insurance, pilot training, and maintenance in the grand total. That Beech Duke you saw in Trade-a-Plane, was a "steal". All it needs is a little TLC and it is ready to go! Next thing you know, you can't find a mechanic that will work on it, parts are nonexistent, and the cost of pilot training and insurance is close to half the National deficit!

So find a plane that fits your budget and will continue to fit your budget for years to come. There are few things as sad as having a great airplane you can't afford to fly.

HOW MANY? As new pilots, we have a vision of flying our friends, family, neighbors, mailman and gardener, on trips all over this great Nation of ours. The cold reality is that unless you have a large immediate family, or can use the plane for business, you will usually be in the airplane by yourself, or with one or two passengers.

It's kind of like the carpool lane in major cities. We all think it

Stevensville Airport Traffic Pattern

By Steve Rossiter

At the February 5, 2007, meeting of the Stevensville Airport Board a local resident came before the Board to register a complaint about aircraft noise, primarily generated by departing aircraft on Runway 30, headed in the direction of Missoula. *The problem occurs when an airplane turns north shortly after takeoff.*

To prevent this problem, the Airport Board asked me to remind Missoula pilots that the standard traffic pattern for the Stevensville Airport when departing Runway 30 requires a left hand 90 degree turn with a subsequent right hand 45 degree turn. This will result in avoiding the noise sensitive area. At the very least when departing Runway 30, do not turn north before crossing the Eastside Highway. This will also result in avoiding the noise sensitive area.

Steve Rossiter is the AOPA Airport Support Network representative for the Stevensville Airport.

is a great idea and plan to use it often, but it doesn't often work out that you have enough "Souls on Board". The plane you should be looking for is one that completes 80% of your planned missions. On the other 20%, try making two trips if you can, rent a larger plane for the day, make the trip with someone else who has extra room, ...etc.

After you work out the answers to those two questions, the

rest becomes fun. Do you like the look of a high or low wing? I like low wings; I think they look good sitting on the ramp. If I'm flying in the back country, though, give me a Cessna 206 or a Supercub. Buy what you like! Some people are adamant about one manufacturer over



What airplane's best for you?

another; I think it is more important how the plane was treated than who built it.

Always get a good pre-buy inspection from a third party before you settle on a plane. You may want to do a full annual even if it's not due, just to be sure. One very important question is: Do you plan on keeping the plane for a long time, or is it just a stepping stone? There is nothing wrong with buying a very specialized, custom plane if you plan on keeping it. But if it is a short term buy or if you are unsure if you will like the plane, try to buy something that has a good resale market. It's bad enough when the day comes and you have to sell your "baby." You don't want to make it worse by taking a financial hit at the same time.

Ask lots of questions and try to bum as many rides in different airplanes as you can. If you still are undecided, you may want to contact an aircraft Broker to help you narrow down your search.

When people ask me: "So what's your favorite airplane?" For me that's easy: "The Next One!"

1st Annual Stevensville Airport Fly-In

By Steve Rossiter, EAA President

Please mark your calendar for June 30 and July 1, 2007, when the Stevensville Airport businesses and users will be hosting a Fly-In. Provisions will be available for anyone interested in flying in and camping with their airplane. More information will be available on EAA Chapter 517's web site at: www.eaa517.org as the date gets closer.

EAA meets every 3rd Monday, with meeting location alternating between the Chapter Hangar at Stevensville and the Missoula Airport Conference Room. The next meeting will be March 19th in Missoula and will feature the subject of formation flying.

MPA meets at the MSO airport conference at 7 PM on Monday, April 2, and Monday, May 7. A July 9 fly-in will be a BBQ hosted by the Missoula Airport and will include a tour of the airport fire/rescue facility.

We're on Your Frequency

MSO GA News thanks Chris Hart, Paul Stafford, Steve Rossiter, Hank Butzel, Art Dykstra, and Don Morton for contributing to this newsletter! If you'd like to earn cash in your spare time, write for something else. But... if you have something interesting to write about for free we'd like to put it in the newsletter and share it with the Missoula aviation community! Long (about 500 words), short, funny, serious... whatever. The next issue will be coming in the spring quarter. Interested in contributing? Contact the editor (see below).

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MISSOULA AVIATION WEB SITES

Missoula International Airport: <http://www.flymissoula.com>

Minuteman Aviation: <http://www.minutemanaviation.com>

Neptune Aviation: <http://www.neptuneaviation.com>

Northstar Air Express: <http://www.northstarmso.com>

Life Flight: <http://www.saintpatrick.org/index.php?view=lifeflight.main>

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Online subscribers receive notice of the availability of each issue of MSO GA NEWS by an e-mail containing a link to a web address where the newsletter can be read and/or downloaded. Would you like to be added to the list of online subscribers? Let me know: Gary Matson, gmatson@montana.com



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