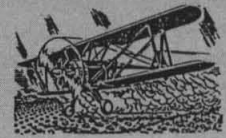


# NORTH DAKOTA AVIATION QUARTERLY



Issue #15

NDAC

April, 1991

## Congratulations Cindy

Bob Simmers, Past President  
NDAC

The Convention is over, the fog has lifted, *Cindy Schreiber-Beck* has emerged as your new Chair-person, CONGRATULATIONS!! We know that good things will happen with your leadership.

AH! YES! the Convention. Thanks to all who helped organize this years Symposium. A job well done! As usual, the hard work does pay off. I have had nothing but compliments from all who attended, the most common comment was that this was the best convention to date. Don't worry, next year will be even better. The Councils promise.

Leland Snow was a huge hit with the ag people and Capt. Mimi Tompkins a joy to all.

The success of the Paul Harvey venture cannot be measured in \$'s. The publicity and exposure locally and nationally was something that money could not buy. The aviation community of North Dakota will long reap the benefits of his appearance here and his exposure to North Dakota. We will probably never know the rest of the story. Not only did his radio show include comments about North Dakota Aviation and North Dakota in general, but it was also printed in news papers that include his commentaries.

So, what's up for next year? Who knows! but if you have some ideas of what you would like to see, contact one of the council representatives with your ideas. Now is the time to start assembling those ideas for next year.

As for me, I will continue to support and work for the council. I really enjoyed my two years at the helm. The friendships and acquaintances that were made will last forever and could only happen with a job like this. I am truly richer from the experience.



Chairman Bob Simmers gives the OK to a fine convention at the Annual Banquet.

A special thanks to all of the council members who have worked to make aviation in North Dakota better. THANK YOU! Thanks to all who attended the convention. Without you it would not be possible. Thanks to the Exhibitors for their support of General Aviation in North Dakota.

Till our flight plans cross again, Happy Flying.

## Storm Water Discharge Permit

Mark J. Holzer, Aviation Planner  
N.D. Aeronautics Commission

On November 16, 1990, the Environmental Protection Agency (EPA) released new storm water discharge regulations which now require that all airports must comply with a permitting procedure within the one year. For further information on this regulation, Mr. Gary Reed of N.D. Health Dept. (701-224-5210) is coordinating airports compliance.

Continued on Page 6

## Aviation Promoter Dies

Gary Ness, Director  
Aeronautics Commission

Wayne A. Peterson, 54, of Grand Forks died suddenly on February 15, 1991. Wayne was a visionary in Education. As Principal of Viking Elementary School, Wayne started the first



Young Astronaut Program in the United States in 1986. That next year, with the participation of the Aeronautics Commission, Wayne introduced an extension program to nine additional communities to bring the program to a statewide audience.

Through these efforts, an additional 200 educators were exposed to the program. Working with the State Kiwanians' organization, each school district in the state received a Young Astronaut Program informational and curriculum packet.

Wayne's enthusiasm for aviation spawned the "Creativity and Excitement in Aerospace Education Institute" held yearly at Grand Forks. This institute is a summer, for credit, continuing education course which is very popular with educators statewide.

The Aeronautics Commission had appointed Wayne as the state's educational representative to the Great Lakes Regional Education Council. Wayne's interest in aviation education gave him international exposure to methods and ideas for the future of Aerospace Science.

*He didn't know how to fly,  
But he loved it.*

*He'd never been into space,  
But he loved it.*

*He knew the future was in Aerospace  
And he loved it.*

He will be missed and his memory will be long lasting as was our friendship.

# PAMA NEWSBRIEFS

Dan Kasowski, President  
ND PAMA

The 1991 Upper Midwest Aviation Symposium has come and gone, I hope everyone that attended enjoyed it as much as I did. We had several excellent speakers this year, I hope everyone had a chance to sit in on their lectures or visit them at some time during the convention.

This years Mechanic Safety Award Program brought in 9 excellent entries, making the selection very difficult for the selection committee. First place went to Emory Babolian (Dakota Aero Tech); Second Place, Mike Pryzbilla (Air Dakota Flite); and Third Place, Tim Anderson (Executive Air Taxi). Congratulations gentlemen and keep up the excellent work.

Nine entries! Not bad, but I'm looking for at least double that this year. It's never to early to send an entry in! I will accept entries from now until the convention next year. Remember, pilots, owners, operators, friends, spouses, whomever, this is an excellent opportunity to recognize that mechanic who has kept you safe over the years, stayed late at night or worked on his days off to get you back into the air.

During the PAMA business meeting we discussed the P.A.M.A. jacket and logo. It was decided that we'll go ahead and have the tape made for the PAMA logo. The PAMA board members will decide on the color and style of coat to be used after we have viewed and approved the logo tape. Hopefully by the time the next newsletter is out we will be able to take orders for our new jackets.

During the meeting we discussed the idea of having a one or two day service clinic, troubleshooting course, or seminar that would allow us to spend more time in a specialized area, hands on with a tech rep. or instructor. It is hard to schedule these kinds of events during the convention because of time constraints and other lectures. Your PAMA council is currently working on this, and if you have any ideas please feel free to contact me or one of our officers.

Due to the resignation of Tim Anderson as PAMA secretary we were faced with the task of electing two new officers this year. Elected as our new secretary is Karmen Johnson (UND), and as treasurer, Chris McIlwain (Dakota Aero Tech). Dave Sahl moves from treasurer to vice president and Dan Kasowski from vice president to president.

Thanks to Dwight Pladson for doing an excellent job as PAMA president. Your PAMA council is already working on ideas for next years convention. If you have any questions, or comments, please feel free to contact me at 777-7911 W. or 746-8515 H.

## Capital Aviation Receives 20-Year Service Award

Lawrence L. Burian  
President, NATA

Las Vegas, Nevada, April 5, 1991 — In a special ceremony during the annual Membership meeting being held in conjunction with the 1991 Convention & Trade Show, the National Air Transportation Association recognized **Capital Aviation Corporation** located in Bismarck, North Dakota for its "20 Years of Membership Service."

Over the years, Capital Aviation has distinguished itself as an industry leader in the General Aviation community, and has worked to foster and promote high industry standards.

Also recognized during the awards presentation ceremony were 19 companies who have celebrated 30, 40, and 50 years as NATA Members. According to NATA officials, the aggregate number of years of membership service by all Member companies now totals more than 12,000 years.

"We're very proud of all our Members," stated outgoing Chairman of the Board Jeffrey A. Cousins. "We're especially proud of those Members such as Capital Aviation who have sustained their strong support and dedicated service to NATA for so many years," he said.

\* \* \* \*

The National Air Transportation Association, now in its 51st year of operation, was established in 1940 and is the private policy group representing the interests of General Aviation service businesses — fixed base operators (FBOs) and on-demand air charter companies — before the highest level of government in the Nation's Capitol.

### Calendar of Events

|               |   |
|---------------|---|
| April 27      | Fly/Drive In<br>Edgeley, ND, 10:30 a.m. CDT<br>Tour Fisher Flying Products  |
| May 18        | Fly/Drive In<br>Miles City, MT, 10:00 a.m. MDT<br>Wild Horse Buckout & more |
| June 30       | Fly-In Breakfast<br>Lisbon, ND, 7-11 a.m.<br>For Info - 683-5501            |
| July 13       | Bismarck Airshow<br>Thunderbirds & more<br>For Info - 223-5660              |
| August 24, 25 | FAA Fly-In<br>Camping, Breakfast, Forums<br>For Info - 347-4680             |

### EAA AVIATION FOUNDATION OFFERS EXTENSIVE SCHOLAR- SHIP PROGRAM

During 1990, the EAA Aviation Foundation awarded scholarships to young people interested in aviation-related academic and technical studies. This year, the Foundation will again administer an extensive scholarship program to encourage aviation studies-and careers-among the nation's youth.

"In order to preserve our rich aviation heritage, we need to find ways to involve today's young people", said EAA President Tom Poberezny. The Foundation's scholarship program has helped more than 100 students begin or continue their aviation studies.

These scholarships, which range from modest grants to awards for full four-year degree programs, can set a student on the path to becoming a pilot, airframe and powerplant technician, administrator or engineer.

The program is open to all young people interested in aviation careers.

Applications for the EAA Aviation Foundation Scholarship Program and additional information on specific scholarship opportunities can be obtained from the Foundation's Education Department, EAA Aviation Center, P.O. Box 3065, Oshkosh, Wis. 54903-3065 or by calling (414) 426-4888 or 466-4800.

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#### North Dakota Aviation Council

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Bismarck, ND 58502

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## FROM THE DIRECTOR'S CHAIR

Gary R. Ness, Director  
ND Aeronautics Commission

### LEGISLATIVE REPORT

The 1991 Legislative Session has come and gone and North Dakota aviation has a new look.

In the past, the aviation excise taxes, fees and licenses, other than aviation fuel tax, were deposited to the general fund. House Bill 1139 changed that. All aviation related revenue collected at the state level will now be dedicated to aviation projects.

The **aircraft registration** will help support the ongoing weatheration computer information centers and additional weather sensor programs. **Sprayer and dealer license fees** will help support updating of aeronautical charts and airport directories. **Pilot registration fees** will help support educational programs and general information updating. **Aircraft excise tax** will help support the Air Service Airport Grant Program. The **aviation fuel tax** will continue to support the administrative and regulatory function of the agency along with the secondary airport construction program.

**HB1576** - Joint Powers Agreements; This bill would have affected the Regional Airport Authority Act along with many other joint powers agreements. The bill failed 39 to 64 in the House. An Interim Study has been recommended.

**HB1383** - Aircraft Repair and Maintenance Lien; This bill strengthens the lien law to favor the repair shops in the state. This bill won big time in the House 79 to 23 but ran into a rough road in the Senate losing the first time for lack of a constitutional majority 25 to 23, but on reconsideration the next day was passed 38 to 15.

**SB2229** - Relating to operation of an aircraft while intoxicated; This bill increased the punishment provision from Class A misdemeanor to Class C Felony if found

guilty. The Senate looked upon this bill as excessive in relation to crime and existing federal law and was defeated 1 to 45.

**HB1219** - A bill to move the Civil Air Patrol from an independent state agency to a division in the Aeronautics Commission. The original bill was amended in the House to eliminate the C.A.P. as a state entity but continue financial support from a grant line item in the Aeronautics Commission's budget. This passed the House 103-3 and after a lively debate passed the Senate 31-19.

**HB1125** - A bill to mandate air ambulance requirements. The original bill was unacceptable to the industry. It passed the House 103 to 1 but was defeated in the Senate 7 to 42.

**SB2580** - A sales tax bill to support water projects in North Dakota. Part of this bill would have increased the aircraft excise tax 1/2%. This was defeated 21 to 32.

**SB2592** - A delayed bill related to workers compensation coverage of aerial applicators. After an extensive discussion in committee in the Senate the bill was withdrawn. The Committee and bill sponsor were convinced that no additional regulation was needed relating to this subject.

There were several pesticide and related ag bills that were heard and acted on, but for this session, nothing that affected aviation in any harmful matter.

(Cont. On Page 6)

## AIRPORT OF THE YEAR AWARDS PRESENTED AT SYMPOSIUM BANQUET

Pictured on right is Michael Ryan, President, Airport Association of North Dakota as he congratulates this years winners.



### BISMARCK AIRPORT — COMMERCIAL CLASS AIRPORT OF THE YEAR

Pictured left to right: Emeroy Swanson, City Commission - Airport Portfolio; Bismarck Mayor, Bill Sorensen and David Miller, Airport Director



### CASSELTON AIRPORT — ASPHALT CLASS AIRPORT OF THE YEAR

Accepting was Bob Miller, Chairman - Airport Authority



### WASHBURN AIRPORT — TURF CLASS AIRPORT OF THE YEAR

Accepting was Bill Beeks, Airport Manager - Washburn Airport.

## State Airport Grant Deadline

By Mark J. Holzer, Aviation Planner

The North Dakota Aeronautics Commission will be holding its general aviation airport grant meeting in late May-early June for the 1991 airport construction projects. Projects should be bid prior to this date.

Projects such as crack repair, overlays, and powerline or tree removal for safety hold high priority with the 5-member Aeronautics Commission. Some \$150,000 of state funds is expected to be distributed statewide with preference also given to matching federal grants.

Communities wishing to submit requests are asked to contact Mark J. Holzer at the Commission at 224-2748 for applications or planning assistance.

# Aviation Career Day

Gary R. Ness, Director  
Aeronautics Commission

Captain Mimi Tompkins of Aloha Airlines and John D. Odegard, Dean of the Center for Aerospace Sciences at UND, gave the 195 high school students from 26 communities the opportunity to see the aviation world from all perspectives. A strong focus on education to move forward in the Aerospace Field was the theme that stood out for the students.

Captain Tompkins account of the fateful day the top came off of her 737 as they flew over the Hawaiian Islands was spell binding. She stressed the need to be prepared in flying as well as life.

Dean Odegard gave the students the perspective of the future and the opportunities and excitement that they have before them.

Five aviation related education programs were exhibited along with the 60 plus industry booths in the exhibit hall. Overall, the 2nd annual Aviation Career Day was a success.



Mimi Tompkins discusses the future with a student.



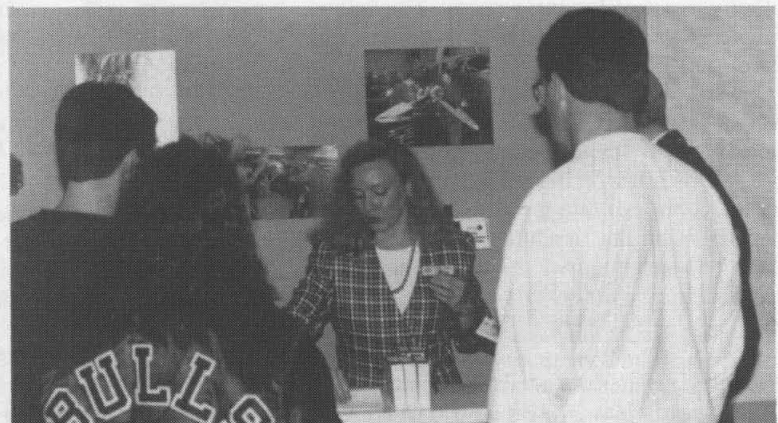
John Odegard addresses group.



Captain Mimi Tompkins,  
Aloha Airlines

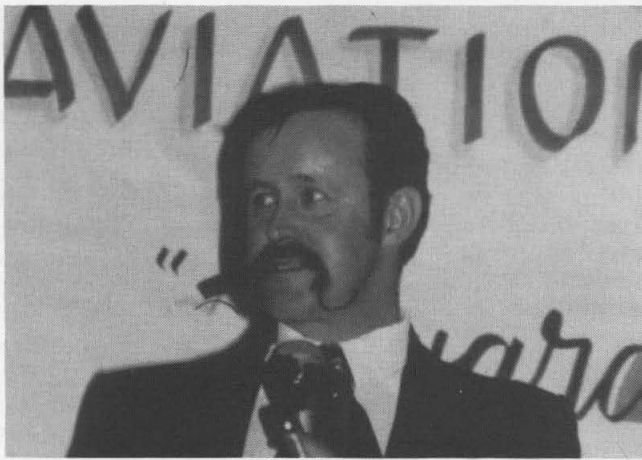


Director Gary Ness, NDAC, and Mimi Tompkins, Aloha Airlines, Aviation Career Day Program.



Educational opportunities are displayed.





The entertainment was enjoyed by all at the banquet. Cowboy poet Bill Lowman had everyone laughing.



Paul Harvey joins Bismarck Mayor Bill Sorensen and his wife, Patricia, prior to Mr. Harvey's presentation at the Civic Center, which highlighted the '91 Convention.



Hettinger received Airport of the Year Award from FAA Great Lakes Region. Pictured from left to right: LaVerne Stippich-Hettinger; Jacque Smith-FAA, Chicago; J.B. Lindquist-Hettinger; Rober Bilingsley-FAA, Chicago.



David Rask received retirement award from Frank Benson, FAA-MPS. Dave was Engineering Manager of the FAA Airports Field Office in Bismarck.



The Aviation community presented Alice Keller with a Centennial Cachet. Honoring 30 years of service with the N.D. Aeronautics Commission.



99's Booth at Convention. They are always welcome and add to every convention. Pictured standing left to right: Wynola Eide - Mandan, Dianne Herr - Turtle Lake; seated: Gwen Vasenden - Fertile, MN, Norma Hillman - Black Hawk, SD, Peggy Gaynor - Fargo.



One of many exhibitors.

# AAND NEWS

Mike Ryan, President

The Upper Midwest Aviation Symposium which was held March 4-6, 1991 was a tremendous success once again with an estimated 600 people in attendance.

As the newly elected President of AAND, I would first like to take this opportunity to thank Erling Rolfson, Past President of AAND, as well as the other past officers and district representatives for their efforts during 1990.

At the banquet we had award ceremonies for the Airport of the Year for the State of North Dakota which is sponsored by the North Dakota Aeronautics Commission and the Airport Association of North Dakota. The winners for 1990 in the three classes were:

Commercial Service Class .. Bismarck  
Asphalt Class ..... Casselton  
Turf Class ..... Washburn

The FAA Great Lakes Region also presented Airport Safety Awards to two airports in North Dakota. The first award went to Grand Forks as an Air Carrier Airport, and the second award went to Hettinger.

I am sure you are all aware by now that Mr. Dave Rask, FAA Engineer with the Bismarck Field Office, has retired; his formal retirement ceremony was held at the Upper Midwest Aviation Symposium. This leaves a concern with many airports in the state to make certain that Mr. Rask's position is filled by a fulltime Airports Engineer in the near future, so that the Bismarck Field Office can continue to provide assistance with the grant proposals, construction change orders, and overall aviation planning in an effective and efficient manner.

I have recently been contacted by Senator Kent Conrad, and he has copied me a letter that he and Senator Burdick had coauthored to send to Admiral James Busey, Head of the FAA in Washington, D.C., regarding the vacancy at the Bismarck AFO. In that letter Senator Conrad stated very distinctly what the needs were for the North Dakota Airports. Senator Conrad has since received a letter from Admiral Busey stating that "there are no plans to change the status of the staff and levels at the Bismarck AFO; it is our intention to fill this vacancy in the near future. In the interim the AFO will continue to provide a full range of services to its clients". Based on this information I, as newly elected President of AAND, wrote Senator Conrad a letter and thanked him for his efforts, and informed him that all members of the Airport Association of North Dakota will be made aware of his efforts in this matter.

This instance points out that it is important for all the airports in North Dakota to be paid up participating members of the AAND, so that we can have a certain amount of clout when we ask for representation from our elected officials.

One of the many challenges that is going to directly affect all airports in North Dakota regardless of size are the new EPA rules that are coming out of Washington regarding the need for all airports to obtain a storm water discharge permit. I can tell you that major commercial airports in the state are banding together with the other major airports in the nation to be included in a group application for commercial air carrier airports through the American Association of Airport Executives. We currently have over 20 members of the Airport Association of North Dakota that have indicated that they would like to band together and form a group application for storm water discharge for the smaller airports of North Dakota. I feel that it is beneficial that all airports are aware that the opportunity currently exists to join a group application for this permit where a small percentage of the airports in the group will be annually tested and screened with the tests somehow funded through a kitty established by the AAND for this purpose. All the smaller airports in North Dakota will benefit by belonging to the group.

The new officers and District Representatives for 1991 are as follows:

President ..... Mike Ryan  
Minot - 857-4724  
Vice President ..... Dave Miller  
Bismarck - 222-6502  
Sec./Treas. .... Jim Lawler  
Mandan - 663-0669  
Dist. 1 Rep. .... Rick Marburger  
Williston - 774-8594  
Dist. 2 Rep. .... Curt Aalund  
Bottineau - 228-5265  
Dist. 3 Rep. .... Roger Thompson  
Larimore - 343-2321  
Dist. 4 Rep. .... Gary Baker  
Jamestown - 252-6466  
Dist. 5 Rep. .... Ron Kary  
Dickinson - 264-7106

*(Cont. from Page 3 - Legislative Report)*

Overall, aviation was treated very even handed by the Fifty-second Legislative Assembly. We enjoy the session when its happening but like the legislators, we are happy when it is over. This was this writer's 3rd session and I must say its not getting easier, but its being done with less wheel spinning. Thank you to all that supported the Commission in its mission this session.

On another topic, as you all know, this May 1st Alice Keller is retiring after 30 years of service to North Dakota aviation. Alice is one of those special individuals that come along so infrequently that one wishes she would not leave. Alice made my transition 4 1/2 years ago very enjoyable. N.D. aviation will miss Alice and we at the Commission will miss her more. Good luck, Alice, and I hope you and spouse Ed will enjoy retirement for many years to come!

## STORM WATER

*(Cont. from Front Page)*

The regulation carries some serious implications, both administrative and financial. The permit process involves the identification and description of each outfall which discharges storm water off of airport property. The sponsor will have to identify any conditions which affect storm water discharges from those outfalls, describe any pollutant sources that may exist, identify outfalls that have been tested for pollutants, identify any significant leaks, spills or discharges that may exist, document the results of biological toxicity testing and identify the accuracy of the information provided.

Permit applications cover both existing and proposed storm water discharges. In addition, sponsors who are anticipating construction projects which involve areas greater than five acres must submit a permit application 180 days prior to commencing construction. Any new discharges of storm water as a result of operations require submission of an application at least 180 days prior to commencing such discharge.

Several options are known to be available at this time:

- Individual application process
- Join a group and cut costs 50-75%
  - Airport Association of North Dakota (AAND) Group
  - American Association of Airport Executives (AAAE)
  - Appropriate Aviation Industry Group (optional)
- State General Authority Transportation Permit (2 or 3 months until it's approved) to be developed by N.D. State Health Dept.

At the April 10th meeting of the AAND Board of Directors, the group decided to adopt a "wait and see" approach. AAND shall wait 2 to 3 months until the N.D. Department of Healths General Permit is developed. Airports thereafter can choose the approach necessary to keep local financial and compliance obligations manageable.

The North Dakota Aeronautics Commission has supported a petition sent to the EPA from National Association of State Aviation Officials (NASAO) to exempt airports in North Dakota from this compliance. We have submitted to the EPA the concern that at least 40% of the airports local mill levy revenues aren't sufficient to pay for this compliance testing.

The North Dakota Health Department is currently formulating procedures for compliance. The airports and aviation industry should keep informed as to the options available for compliance. The best advice is to be knowledgeable on the subject so when the deadline to act approaches, you can react appropriately.



From The  
**North Dakota AFSS**

Bob Fishman  
FAA Air Traffic Manager

"April hath put a spirit of youth in everything" (William Shakespeare). No one understands those words better than those of us that live above the 46th parallel. Spring has sprung—which somehow still comes as a surprise!

Thunderstorm season is just around the corner, and I would like to bring an important preflight briefing item to your attention. If you are exclusively using a commercial weather vendor, remember that the radar summary charts will always be at least an hour old and, therefore, can be very misleading. It is very important for pilots to know that precipitation in certain areas of the U.S. is not always routinely plotted on the radar summary chart (e.g., Williston and Bismarck are not "Network" radars and will not transmit information to be plotted unless it reaches—or is forecasted to reach—severe levels. After they have done this and time/staffing permitting, they will then transmit that information for inclusion in the next radar summary chart. The only "Network" radar routinely plotted in North Dakota is at Fargo—which leaves the western two-thirds of the state without precipitation information. If you rely solely on the radar summary chart to assist in circumnavigating precipitation or in making a go or no-go decision you'll soon find your backside in a tough situation. I would expect that you are now saying to yourself, "How do I get all the weather information that I need to conduct a safe flight?" Simply call your personal weather briefer at the North Dakota AFSS, who has almost instant access to five live radar sites in this state alone and who would be happy to assist you in planning a safe flight. Our toll-free number is 1-800-WX-BRIEF (1-800-992-7433). We can be reached on any of the following frequencies:

EMERGENCY

|               |                |       |
|---------------|----------------|-------|
| GFK . . . .   | 122.6, 122.2   | 121.5 |
| DVL .         | 123.6R, 122.1R |       |
|               | 111.0T         |       |
| FAR ..        | 122.1R, 116.2T |       |
| JMS . . . . . | 123.6, 122.2   | 121.5 |
| DØ4 . . . . . | 122.4          |       |
| MOT . . . . . | 122.2          | 121.5 |
| BIS . . . . . | 122.2          | 121.5 |
| ISN . . . . . | 123.6          |       |
| DIK . . . . . | 122.2          | 121.5 |

If you have any concerns, questions or comments, please feel free to contact me at (701) 772-7489. When in the Grand Forks area, stop in and visit us.

**NDPA Quarterly News**

Stu Bohn

A list of members, a membership card for '91 and details for the April and May fly-ins/drive-ins should be in the hands of all members.

If we missed you, or you wish to join the NDPA, send \$19 to: Stu Bohn, RR 2 Box 3, Lark, ND 58535.

April Fly-in/Drive-in: Fisher Flying Products - Saturday, April 27th - Edgeley, ND - ETA Edgeley Airport - 10:30 a.m. CDST - ETA Fisher Flying Products - 11:00 a.m. CDST.

Fisher Flying Products handle six difference aircraft kits and also will build aircraft for customers.

May Fly-in/Drive-in: Miles City, MT - Saturday, May 18th - ETA Miles City A/P - 10:00 a.m. MDST.

Wild horse buckout and other happenings.

If you have an interesting idea for a fly-in/drive-in in ND, drop me a line.

**Safety Is The First Priority**

Robert A. Huber, Supervisor  
Minnesota/North Dakota Section  
FAA - Airports District Office

Each of us must make safety our first priority. Every year there are many accidents and incidents involving aircraft and vehicles on airports that result in property damage, personal injury, and sometimes death. Most of these accidents and incidents could have easily been prevented. It's up to each one of us to make sure we do everything we can to make the airport as safe as possible.

If you have never worked on an airport before it can be a confusing experience for the first few weeks. Some airport operators, airlines, and fixed based operators (FBO's) have extensive formal training programs for employees whose duties involve operating a ground vehicle on the air operations area. However, many rely solely on informal on-the-job training.

In an effort to improve the safety of ground vehicle operations on airports, the Federal Aviation Administration developed a publication entitled "A Guide to Ground Vehicle Operations on the Airport". This guide provides airport orientation and operational information and is intended for use as a resource document by airport operators and other members of the aviation community responsible for training ground vehicle operators. In addition to orientation and operational information, the guide touches on some other areas that a ground vehicle operator may

**"TOPSY TURBULENCE"**

Mark Ewens  
Meteorological Technician  
National Weather Service, Fargo, ND

It's a CAVU/CAVOK kind of spring day as Joe Pitot, ace Cessna 172 pilot struts across the tarmac. A southerly breeze and cloudless sky promise to bring warm temperatures to the region. After an uneventful preflight, Joe taxis out and waits his turn for takeoff.

After a few loops in the pattern, Joe decides to try a few touch and goes. On the glide and looking fine into 31, until he is passing over the inner marker. Passing through 500 feet, the stick started to feel mushy. He adds trim and power, but the ride continued to get rough. At 150 feet AGL he takes a few sharp bumps! Hardly light chop! Passing over the overrun, things smooth considerably. Another uneventful landing.

Turbulence is one of the many aviation hazards flight briefers and National Weather Service (NWS) forecasters try to warn pilots of **before** it happens. Yet as in the scenario above, even thermal turbulence can get out of hand.

There is basically two types of turbulence: Thermal and mechanical. Thermal turbulence is caused by "differential heating". It occurs year round, and is most noticeable under sunny or mostly sunny skies. Differing soil types are heated at different rates by the sun and the resultant temperature difference causes updrafts of different velocities. In certain conditions, such as over a shoreline, up- and downdrafts can exist within a short distance.

When an aircraft flies through these areas of differing upward moving air columns, the result is turbulence. In most cases only light chop results. However, in dry air masses during the spring very strong solar heating, this can lead to quite

*Cont. on Back Page*

encounter, such as foreign object damage, security, and reporting of emergencies.

By its very nature it is necessary for the guide to be generic. If the guide will be used as a training document at a specific airport there is a need to supplement the guide with information pertinent to the particular airport. Several references are made to this fact throughout the text of the guide. Likewise, there may be information in the guide not applicable to the particular airport which should be deleted when used.

Copies of this guide have already been distributed to all commercial air carrier airports but it is also an equally beneficial guide for general aviation airports. Copies of the guide may be obtained free of charge from the Bismarck Airports Field Office.

# NDAAA HIGHLIGHTS

Cynthia Schreiber-Beck

## CONVENTION OVERVIEW:

At the NDAAA Annual Meeting the membership voted to; display at Big Iron, September 10-12, 1991, in West Fargo, and loan the NDAC \$4,000.00. President Wischer established committees: to research the possibility of changing recertification procedures or requirements, and to research the cost of designing and printing a brochure about the organization. Vern Hofman, NDSU, will again coordinate pattern testing with interested operators; Cameron Wischer will serve as the NDAAA representative on the ND Groundwater Task Force; John Halldorson will represent the Association on the Ag Coalition, J.B. Lindquist will continue his lobbying efforts; and Eugene Knutson won two round trip tickets to the 1991 NAAA National Convention in Las Vegas given by DUPONT.

The newly elected officers include:

President ..... Randy Lahren, Kindred  
Vice President & NDAC Representative .. Marlin Haberstroh, Lisbon  
Secretary/Treasurer & NAAA Director ..... Gerry Beck, Wahpeton  
NW Director ..... Kent Taylor, Watford City  
SW Director & Lobbyist ..... J. B. Lindquist, Hettinger  
SE Director ..... Rick Hoistad, Forman  
NE Director ..... John Jenson, Grand Forks  
NDAC Representative ..... Rick Ring, Langdon  
FAA Liason & Alternate Lobbyist ..... Lynn Larson

Award recipients selected:

Ron Deck - In appreciation for his outstanding service to and representation of the NDAAA during his NAAA Presidency.

Craig Bye - 1991 Rookie Pilot of the Year

Five operators, Kent Taylor, John Halldorson, Marlin Ingebretson, Tim McPheron and Cameron Wischer, visited Rita Murphy Elementary School on Monday morning during the convention. They spoke to fourth, fifth and sixth grade students about the agricultural aviation industry and the role it plays in production of food, fiber and forestry products.

All those in attendance benefited from the information presented by the NDAAA guest speakers; Michael Leetch, ICI Americas Inc., on drift; Louis Huffman, USDA-APHIS-ADC State Director and Gene Ellan on blackbird control; Steve Zahos, Envirecycle, on recycling plastic containers; and Leland Snow of the present existence development and future of agricultural aviation. The recertification presenters also deserve credit and recognition for their portion of the convention. The work they do insures that the ag operators can continue to get up at dawn and work until sunset!

Barb Deck, ND, and Vernon Orr, IA, represented the Women of the NAAA and the NAAA respectively at the convention. President Orr briefed those in attendance about NAAA happenings in Washington and across the country.

## MEMBERSHIP UPDATE:

The present membership of the NDAAA consists of: 107 operators, 17 pilots; and 3 allied. Nonmembers should send their dues, (\$35.00 - operator and allied, \$10.00 - pilot) to the NDAAA Secretary/Treasurer, Box 843, Wahpeton, ND 58074, so the NDAAA booth membership list and mailing list can be accurately updated. The National Agricultural Aviation Association also requests that dues be sent in now since the directory will soon be printed. (Operator dues \$300.00; NAAA, 1005 E. St. SE, Washington, DC 20003)

## "TOPSY TURBULENCE" (Cont. from Page 7)

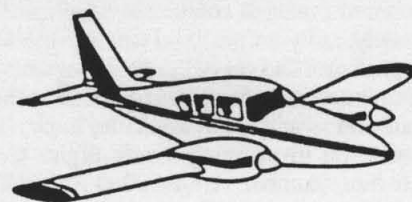
a bit of thermal turbulence. Just the right combination can be dangerous.

Mechanical turbulence occurs year round also, but is not dependent on sunshine. Air flowing across rough terrain, or from smooth to rough terrain, sets up "eddies" in the atmosphere which roll along. The stronger the wind speed, the stronger the eddies, the greater the turbulence. If air is flowing parallel to a set of hills or ridges, the turbulence will be confined along the peaks. If air is flowing perpendicular to the ridges or hills, the turbulence will extend "downwind" a greater distance.

Mechanical turbulence can occur even with slight changes in terrain. If a strong westerly wind (over 25KTS) is blowing from west to east across the Red River Valley, a pilot flying from Fargo to Detroit Lakes may very well expect a bumpy ride.

Both thermal and mechanical turbulence can extend up to 10,000 AGL. At times they may coexist, enhancing the danger to low flying aircraft. AIRMETS and SIGMETS are rarely issued for thermal or mechanical turbulence unless it is expected to be greater than moderate. It is up to NWS briefers and pilots to work together in ensuring pilot safety and issuing better local and regional forecasts. Make weather briefings a regular part of your pre-flight checklist, even on clear days. NWS forecasters and briefers are ready to assist you in having a safe flight.

In a later article, we will talk about low level wind shear and thunderstorm turbulence.



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