

MINUTES - NORTH DAKOTA ATMOSPHERIC RESOURCE BOARD

APRIL 6, 2009

Chairman Henry Bodmer called a telephone conference call meeting of the Atmospheric Resource Board to order at 9:05 a.m., April 6, 2009.

ROLL CALL

Roll call was taken. Members present were Henry Bodmer, David Hagert, Ervin Opsal, John Bollingberg, and Steven Weber.

Others present were Darin Langerud, Director; Kelli Schroeder, Business Manager; Mark Schneider, Chief Meteorologist; Daniel Brothers, Environmental Scientist; Hans Ahlness, Weather Modification, Inc. (WMI); and Tom Tupa.

MINUTES

IT WAS MOVED BY MR. HAGERT, SECONDED BY MR. OPSAL, AND CARRIED ON A VOICE VOTE TO APPROVE THE MINUTES OF THE OCTOBER 27, 2008 MEETING AS DISTRIBUTED.

FINANCIAL STATUS REPORT

Ms. Schroeder reviewed the financial status report for the period ending February 28, 2009. In response to a question, Mr. Langerud noted the major remaining expenses for the rest of the biennium. We will end the biennium under budget.

2009 LEGISLATIVE UPDATE

Mr. Langerud gave a brief overview of the Water Commission appropriation bill relating to funding of the Board's programs. At this time there have been no changes made that would affect the Board's funding for the 2009-2011 biennium.

Mr. Frink arrived at approximately 9:15 a.m. He explained that there had not been a legislative subcommittee meeting on the bill as of yet but expected one soon. He does not see any changes for ARB, with the exception of possibly the Board's resources trust fund portion (\$350,000) due to the Fargo Flood funding.

WEATHER MODIFICATION LICENSE RENEWAL APPLICATION

Mr. Langerud stated one license renewal application had been received. The application is from Weather Modification, Inc. Mr. Langerud reported he approved the renewal of the weather modification license of Weather Modification, Inc., Fargo, North Dakota for 2009.

2009 WEATHER MODIFICATION PERMIT APPLICATIONS

Mr. Langerud informed the board that permit applications and fees from Weather Modification, Inc. for District I and District II have been received. He recommended the permit applications be approved contingent upon public response after legal notices have been published and time has been allowed for public comment.

Mr. Frink left the meeting at approximately 9:30 a.m. to attend a legislative subcommittee hearing.

MR. BOLLINGBERG MOVED TO APPROVE WEATHER MODIFICATION PERMITS FOR DISTRICT I AND II FOR WEATHER MODIFICATION, INC., FARGO, ND, CONTINGENT UPON PUBLIC RESPONSE. SECONDED BY MR. OPSAL. VOTING YEA – MR. HAGERT, MR. OPSAL, MR. BOLLINGBERG, AND MR. WEBER. THERE WERE NO NAY VOTES. MOTION CARRIED 4-0.

NDCMP RADAR UPGRADES

Mr. Langerud noted that the Board has been operating radars in Bowman and Stanley since the 1997 and 1998 seasons, respectively. These radars have been unchanged, for the most part, since installed. In the next month, we will be significantly upgrading the radars with new electronics and software that will improve their low-end sensitivity. We will be able to see clouds and precipitation earlier than we do currently. The radars will also have Doppler velocity capability. The new antenna controllers and software will allow us to operate the radars remotely, such as operating off-season from the Bismarck office or doing radar calibrations remotely. There will also be a week of training provided to the staff. The staff will be operating the radars during the month of May to familiarize themselves with the system.

Mr. Langerud noted that he had given a presentation at the request of the Bowman County emergency manager for a regional emergency management meeting. Mr. Langerud gave them an overview of the Bowman radar equipment and the possibilities that may be available to them once the upgrades are completed. National Weather Service radar coverage in the southwest part of the state is not as good as it could be. The Bowman radar fills in a significant gap in the coverage. One of the things we may eventually be able to offer area emergency managers is real-time data-feed to any end-user utilizing a free licensed software component from Vaisala. They would have access to the data and be able to interact with it. An emergency manager from Baker, Montana is also interested.

2009 NDCMP PREPARATIONS

Mr. Schneider reported on ongoing activities in preparation for the 2009 NDCMP. There is no shortage of applicants for field and intern meteorologist positions. Mr. Schneider has scored all applicants and hopes to have hiring completed by April 17th.

Ms. Schroeder reported that she wasn't able to travel to UND for intern pilot interviews this year due to the weather. However, she and Mr. Poellot conducted the interviews over the telephone. All intern pilots have been chosen. One has not met his ratings

requirements yet, so his internship is contingent upon receiving those ratings by April 30th. If he does not, there is another person who could fill that position.

Mr. Schneider reviewed housing issues in Stanley and Bowman. He also reviewed chemical and flare procurement. Last year we paid \$209.42 per unit for silver iodide. This year the lowest bid came in at \$167.86 per unit. Also, last year acetone cost was \$323.75, FOB vendor site. This year the bid came in at \$267.00, FOB vendor site.

ARB RESEARCH & EVALUATION EFFORTS

New Economic Study

Mr. Langerud reviewed the economic study done by Dr. Dean Bangsund and Dr. Larry Leistritz at North Dakota State University. The study looked at rainfall enhancement benefits (5-10% increase) and hail suppression benefits (45% decrease) to crop development in the cloud seeding areas. It also considered what the prospective benefit could be if the program was applied state-wide on the 8 most common crops grown in North Dakota including all varieties of wheat, barley, flax, sunflower, beans, corn, and canola plus alfalfa.

The scope of the study didn't involve an evaluation of the physical processes of rainfall enhancement or hail suppression. It took the results of previous studies that have been done and applied them to an agricultural scenario to see what that would mean for production and the overall economic enhancements where the project is being practiced.

Polarimetric Cloud Analysis and Seeding Test 2 (POLCAST2)

Mr. Langerud reviewed the POLCAST2 operations. It was a randomized cloud seeding project that tested hygroscopic flares over northeastern North Dakota last summer (2008) in cooperation with National Center for Atmospheric Research, University of North Dakota, Weather Modification Inc., and Ice Crystal Engineering. Mr. Langerud attended a meeting of the principal investigators, who are very happy with the data set received from the radar and also from the aircraft. They had started the analysis process. There won't be enough data to make a significant statement on the effectiveness yet. Our hope is to conduct another set of operations in the summer of 2010, if the budget allows, and gather more data for statistically significant results. Mr. Langerud noted that UND and NCAR have asked for no-cost extensions to complete the work. Mr. Langerud will extend their contracts through the end of the year. Final reports are expected at the end of the year.

Congressional Legislation For Weather Modification Research

Mr. Langerud reported that the North American Interstate Weather Modification Council has been working on legislation to implement a federally funded weather modification research program with state funded cost share. Senator Kay Bailey Hutchison introduced Senate Bill 601 that would establish a 5-year research and evaluation program, funded at \$25 million per year, to try to forward the science of weather modification.

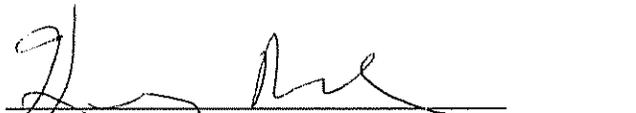
In response to a question, Mr. Langerud briefly reviewed the Wyoming Pilot Project. They are finishing their 4th year of operations with 2 more years remaining. It is a randomized seeding program for winter operations. Mr. Ahlness indicated that the biggest issue is to get enough cases to make their results statistically significant. The target areas are very small, making this difficult.

2009 ARBCON UPDATE

Mr. Brothers reported that instruction letters, reporting cards, and replacement rain gauges were mailed to the cooperative observer network the week of March 23rd. Reporting began April 1st. As of this date, there are 724 active observers in the 2009 network. We are continuing on-line reporting this year with 124 observers indicating they will report on-line. This spring Mr. Brothers may do some observer site visits. He enjoyed meeting one observer this past year.

Mr. Bollingberg has an ARB gauge and a Dewey gauge about 60-70 feet apart. The Dewey gauge consistently reads higher than the ARB gauge. Mr. Langerud reviewed differences in our gauge compared to other gauges that you can buy. He noted that at that distance, you could have minor differences in rainfall. But if you are seeing consistent differences, there could be a gauge-sighting issue or collection efficiency differences in the gauges. Mr. Langerud offered to look at the data if it is provided to us. Mr. Bollingberg indicated he could send us his data.

Being no further business the meeting adjourned at approximately 10:15 a.m.



HENRY BODMER
CHAIRMAN

DAVID HAGERT
SECRETARY-TREASURER

Transcribed by Kelli Schroeder