

MINUTES

NORTH DAKOTA ATMOSPHERIC RESOURCE BOARD NOVEMBER 12, 1998

The Atmospheric Resource Board was called to order by Chairman William Geiger at 9:00 a.m. MST, November 12, 1998, at the Sodbuster Room, Elks Lodge, Dickinson, North Dakota. Board members present were Bill Geiger, Jim Haaland, Joe Porten, David Sprynczynatyk, and Mark Holzer representing Gary Ness. Staff members present were Bruce Boe, Director; LeNor Dollinger, Business Manager; Darin Langerud, Chief Meteorologist. Others present were Troy Seidel, Monte Hininger, Bart Fisher, Fred Remer, Orville Hellandsaas, Eldean Flynn, Sandy Flynn, and Mike Dwyer.

FINANCIAL STATUS REPORT

Mr. Bruce Boe informed the Board that 62% of the biennium has passed as of September 30, 1998. He noted that the Board may likely have to go back to the Water Commission Board for additional cost sharing funds. Mr. Sprynczynatyk noted that the earliest the Board should ask would be April 1999, after the outcome of the legislative session is known. Boe also noted that there is very little flexibility remaining in the operating expense line item. There were no questions.

PROPOSAL TO OPERATE THE BOWMAN WEATHER RADAR YEAR-AROUND

Mr. Boe informed the Board that ever since the Atmospheric Resource Board redeployed the old Bismarck Weather Service radar in Bowman there has been a lot of interest in the Bowman community to see that radar operated more than just the project of June through August of each year. This last summer Mr. Boe was contacted by Duane Schaaf, Chairman of Bowman County Emergency Management. Mr. Schaaf and Bowman county officials with nearby towns are putting together a proposal to be submitted for federal grants that would support community development for employment for Bowman county. Mr. Schaaf thought it might be possible to operate the Bowman radar year around. The grant proposal was for a ten year period. Mr. Haaland asked if the money is all grant money or is there some community money. Mr. Boe replied that the way he understands it, it will be grant money only, and added that we don't know how the proposal itself may be faring or if the radar proposal is being given serious consideration.

1998 NORTH DAKOTA GROWING SEASON RAINFALL TOTALS

Mr. Langerud distributed maps of the 1998 April - September rainfall and the 1991-1998 average growing season rainfall. The maps will also be put on the web page, he said. Discussion followed, and it was suggested that a map depicting the long-term climatological average would also be useful so that the extreme nature of the excess precipitation in the eastern portions of the state could be better seen.

UPDATE ON STATUS OF SLOPE COUNTY FOR 1999 PROJECT SEASON

Mr. Boe informed the Board he has not heard any new information on Slope County. There is a

petition out to restore the Slope County Weather Modification Authority, he said, nothing that the last he had heard, they were close to the 51% signatures needed.

UPDATE ON INTERIM HAIL SUPPRESSION STUDY (HCR-3043)

Mr. Boe informed the Board that HCR-3043 was adopted by the Legislative Council at the end of the last session. The resolution directed a study of hail suppression for the State of North Dakota. As a result of the testimony given, several bill drafts were produced by Rep. Drovdahl. The Insurance and Health Care Committee voted 8-3 to send a bill draft for a statewide hail suppression program to the 1999 legislature for consideration.

The original proposal that the insurance industry should be required to put on a policy fee or premium tax to help pay for the program was dropped, and replaced with a general fund appropriation.

PUBLIC INFORMATION UPDATE

Weather Modification Survey Results

Mr. Langerud reported on the survey that was sent out to all the members of the Cooperative Rain Gauge Network. We received 504 surveys back out of the 851 that were sent out. He briefly reviewed some of the salient findings, and answered questions about the methodology.

Update on Web Site

Mr. Langerud stated that the Atmospheric Resource Board (ARB) web site is being updated, and may, when time allows, contain some interactive materials as well. He added that it has been suggested that even CD-Rom could be used to bring such materials to the classroom.

New "20 Questions" Weather Guide

Mr. Boe noted that a third Weather Guide is being written which will address common questions about cloud seeding. There are presently four pages of material, this will be formatted and graphics added. Mr. David Sprynczynatyk suggested that the title be "the most common questions" instead of only 20 questions." He added that the responses to the questions might be shortened, and he suggested that a question on the Weather Guide could be "Can I learn more about cloud seeding on the Internet?" Mr. Geiger asked how the staff proposes to get the information to the public. Mr. Langerud and Mr. Boe explained that the Weather Guides are generally distributed in response to inquiries, or at fairs, trade shows, and the like.

COOPERATIVE RESEARCH OUTLOOK, PLANS

Mr. Boe reminded the Board that the cooperative research federal funding was dropped 2 years ago.

There has not been any federal weather modification research since that time. Staff are presently exploring means to bring such funding back, including expansion of the cooperative observer network to collect hail data in some urban areas.

PLANS FOR POST-ANALYSIS OF PROJECT RADAR DATA (BOWMAN AND STANLEY)

This year the radars collected more data than ever before with new TITAN data acquisition system. Every 15 minutes, a portion of the data the meteorologist was seeing was downloaded to the Internet. Staff intends to examine the data in the winter months to develop new case studies for training and public information, and to look for evidence of seeding effects. However, Mr. Paul Moen, who had indicated an interest in doing this work, has accepted a position in Argentina. It is not clear how much the remaining staff can get done.

REVIEW AND DISCUSSION OF THE 1998 NORTH DAKOTA CLOUD MODIFICATION PROJECT

Preliminary Project Budget Summary

Mr. Boe informed the Board that the project went over budget. This was largely due to additional flight hours, which the counties agreed to fund. Other costs were close to those projected, except chemicals, which were lower due to reworking of NOAA flares (rather than purchasing new ones), and radar costs, which were greater than anticipated because of the high TITAN lease costs.

Post-Project Chemical Inventory Report

Mr. Langerud informed the Board that roughly 100 units of dry chemical are available for the start of the project next year, along with about 500 ejectable flares and 150 burn-in-place flares. There will have to be significant purchase of new chemical, he said. Inventories are very similar to what they were this time last year.

Dry-Ice Use Report

Mr. Langerud reported the cost of dry ice in District I per pound used was \$2.83, and \$1.50 in District II. The main difference in the use of dry ice in each district is that District I flies less, and therefore has fewer opportunities. In addition District I is smaller than District II, so the flights in District I are shorter.

Radar Data Acquisition, Display, and Archival

Mr. Boe informed the Board that TITAN radar data acquisition software is now used at both radar sites. The data were also ported to the Internet in near real-time this year. Every fifteen minutes images were updated. The Weather Service and news media benefitted from the information from

the Internet.

Wing - Tip Generator Performance Report

Mr. Langerud reported that this year was one of the best we have had, with a failure rate of only 3.6%. Until this year, the Lohse generator was always operated with a “stall fence” on the tail cone. This year Weather Modification, Inc. (WMI) removed the stall fence, making the burner flame much longer. This may have changed the character of the nuclei being produced. The staff would like to see WMI take the generators down to the Colorado State University Cloud Simulation and Aerosol Laboratory and have them re-tested.

Contractor’s Final Project Report

Mr. Fred Remer, Chief Meteorologist for WMI, informed the Board that they delivered 150 copies of the final report. Mr. Boe made comments on the final report, and provided a listing of some corrections. The Board took no action on the final report for lack of a quorum.

Aircraft Performance Report

Comments regarding aircraft performance were made by the following persons, as indicated:

Bruce Boe noted the information that was distributed in the informational packets sent to the board listed the six missions missed during the 1998 cloud modification project. This is a considerable reduction from 1997 (18 missed missions). The contractor is subject to penalty in the of \$514.00 per aircraft day for each day in which cloud seeding aircraft were not operational. For the 1998 project, the penalties for the six days which were all cloud-base aircraft total \$3,084. Last year the board levied \$10,858. In penalties for the 18 missed missions. Down time was greatly reduced this year but the penalty clause still applies according to contract, however, it is to the board’s discretion whether or not they want to waive or assess such penalties. Since there is no quorum, formal action cannot be taken and this presented for your information.

Mark Holzer, Aeronautics Commission (representing Gary Ness), asked if the board has ever waived or reduced the penalties and is there a history of setting a precedent.

Bill Geiger state he believed 1997 was the first year that penalties had been assessed, asked for opinions from the other board members.

Jim Haaland believed the contractor has moved in the right direction, and that the contractor has made a good effort. If the board completely waives penalties just because WMI is improving destroys the board’s credibility. On the other hand, maybe they should be rewarded for what they have done.

Joe Porten feels the board needs to keep the penalties in place. He doesn’t think we can afford not

to have some kind of penalty in place. We have been through this before and now it seems like if there is a penalty imposed that we get a little better action from the contractor. I think the contractor is working hard trying to resolve this, too.

Bill Geiger looks at it from a little different point of view. He understands and respects the opinion of the others but these are mechanical devices, and the best devices he has ever seen have failed a time or two. He thinks there has been remarkable improvement on the burners and other things. Since we cannot act on this without a quorum, he is willing to waive the penalties, but the board must make the final decision. He is impressed with the effort that has been made and thinks it is a lot better than a few years ago.

Fred Remer WMI, (contractor). Over the past couple years the flight hours have increased dramatically so you are going to see quite a few more missed launches. And also, secondly, if you look at all the missed flights, all except one, have been with Twin Comanche aircraft. The long-term goal of WMI is to eliminate the Twin Comanche's from our fleet. We tried that very diligently last year but it wasn't completed because there weren't many buyers for Twin Comanches. We plan this year also to be rid of these aircraft and have an all-Seneca fleet. The reason for that is the Senecas are a newer aircraft, more reliable, and more spare parts are available and easier to repair, and also standardization among the fleet. We will then be able to have bigger inventory and less down time. I would like you to keep that in mind when you make that decision.

Bill Geiger - In your other locations where you are working, do they have their percentage of Twin Comanche's or do we have them all?

Fred Remer - You have all the Twin Comanche's and Seneca's that we own. On other projects we use Cessna 340's and turbine aircraft.

Bruce Boe - The Cessna 340's that Mr. Remer alludes to are the aircraft we use as cloud-top seeding aircraft. Most of the work done on other projects is done on top with higher performance aircraft. This is one of the ways we have held our costs down is to continue with the lesser aircraft that are not pressurized but that can do the work at cloud-base.

Bruce Boe stated a telephone conference call could be held to finalize this action and pay the contractor, or to meet during the time of the ND Water Users Annual Meeting in December. Mr. Boe noted he is not aware of other business the board may have at that time to warrant holding a meeting.

LeNor Dollinger noted the contract calls for the final contract payment to be authorized upon final report being presented to the board, which WMI had done.

Mr. Geiger asked if anyone present had any comments.

Eldean Flynn, McKenzie County Weather Modification Authority, thanked WMI for their efforts

in making changing to the wing-tip generators. Regarding aircraft down-time from the county level, he noted that when an aircraft isn't on a storm then he gets the phone calls, so it is important the planes fly each mission.

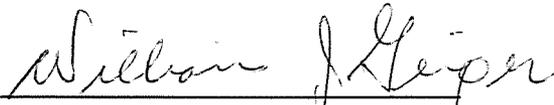
Monte Hininger, Williams County Water Resource Board, noted that Williams County is really teetering on this program - - wanting to pull the plug or stay in. I'm not too sure what the penalty clause entails but keeping the contractor sharp with their equipment, but I'll voice my displeasure if you remove any clause to hold these contractor's feet to the fire for performance. I think that is sending out a wrong signal. Nothing against the contractor, its just called business. And, if I go back and there is any wind of this, Williams County could just pull the plug. There are some things that just don't set right, OK, so I'm just voicing my opinion of how I can read my board and if I go back and they see displeasure in my tone, they will pull out. I'm really trying my best to keep them in and I appreciate the support that I received in that effort.

Mr. Geiger thanked those present for their comments.

NORTH DAKOTA WEATHER MODIFICATION ASSOCIATION - MIKE DWYER

Mr. Mike Dwyer commented that there are legislators that support the program, and there are those who do not. The legislators are always looking at whether this is a good program or not. In 1993 it was approved that water resource boards could have a temporary program for four years. The Williams County Water Resource has decided to have a program for four years. The association will spend most of it's efforts on Williams County. Williams chose to have the program until 2000, and then put it on a special ballot for the people to vote on it. The Association is planning on having the *Water* magazine have a special weather modification issue in March 2000. Mr. Langerud commented that ARB staff is doing an updated economic study with North Dakota State University (NDSU) on the program, and taking it one step further and asking them to run a model that will determine how much of an increase in general fund tax revenue the increased production would generate.

The meeting was declared adjourned at 11:30 a.m. MST.



William Geiger, Chairman

Date 3-3-99

Hattie Melvin, Secretary

Date _____

Transcribed by Dawn Feist