

MINUTES  
NORTH AMERICAN INTERSTATE  
WEATHER MODIFICATION COUNCIL  
Holiday Inn  
Rapid City, South Dakota  
April 23, 2003

The meeting was called to order by Chairman Darin Langerud at 1:00 p.m., April 23, 2003, at the Holiday Inn, Rapid City, South Dakota. Members present were: Maurice Roos, California; Arlen Huggins, Nevada; Darin Langerud, North Dakota; LeNor Dollinger, North Dakota Weather Modification Association; Dale Bates, Texas Weather Modification Association; Tommy Shearer, Texas Weather Modification Association; Dave Cole, Utah; Dr. Joseph Warburton, Walker River Irrigation District (NV); and Affiliate member Dr. Harold Orville, SD School of Mines & Technology, South Dakota.

Other present were Dr. Joe Golden, NOAA FSL, Boulder, CO; Aaron Gilstad, North Dakota; Andrew Clausen, North Dakota; and Archie Ruez, Texas.

MINUTES

Dale Bates moved the minutes of the September 12, 2002, meeting be approved as distributed. Second by Joe Warburton. Motion carried.

MEMBERSHIP REPORT

Joe Warburton reported the following had paid dues and/or special assessments for the calendar year 2003: Nevada, North Dakota, ND Weather Modification Association; Utah, Santa Barbara County; Western Kansas Groundwater District; Walker River Irrigation District; Oklahoma; and Texas Weather Modification Assn. South Dakota School of Mines & Technology have also renewed their affiliate membership for 2003.

ELECTION OF OFFICERS

Chairman Langerud called for nominations for Secretary-Treasurer.

Dale Bates nominated Dr. Joseph Warburton as Secretary-Treasurer. Second by Dave Cole. Motion carried.

Chairman Langerud called for nominations for Vice-Chairman.

Joe Warburton nominated Dave Cole. Second by Dale Bates. Motion carried.

Chairman Langerud called for nominations for Chairman.

Dale Bates nominated Mike Mathis. Second by Arlen Huggins. Motion carried.

### FINANCIAL STATUS REPORT

Joe Warburton distributed and reviewed the financial status report dated 4-23-03. The report shows a balance of \$37,971.52 in the checking account at Citibank, Reno, NV.

Discussion was held on the possibility of more members ability to pay the special assessment for 2003. It was noted the only members who have paid the special assessment at this point is Oklahoma, North Dakota, and Walker River Irrigation District. More members will have to pay the special assessment in order to keep Rick Spees working for the Council.

Discussion was held regarding changing the procedure for signing NAIWMC checks. At the present time two signatures are required (Joe Warburton and George Bomar). This is very unhandy given Joe is in Nevada and George in Texas. The time spent in paying obligations is unwieldy. The suggestion was made that Arlen Huggins be the second signatory on the checks, since both he and Joe are in Nevada. The general consensus was to proceed in this manner.

Arlen Huggins moved the financial status report of 4-23-03 be approved as presented. Second by Dave Cole. Motion carried.

### ORGANIZATIONAL ISSUES

Membership application - Arlen Huggins reported the Chairman had requested a membership application be drawn up in order to formalize the application procedure. Mr. Huggins drew up a two-page application including all categories of memberships. The application form will assist in determining if the applicant is applying for the correct membership category.

Dr. Joe Warburton moved the membership application form be adopted with the present by-law wording and sent to potential members. Second by Dale Bates. Motion carried.

Discussion was held on the types of entities that would be sent information regarding future membership in the NAIWMC. It is not the intent to open membership to others that would compromise the current structure.

Dr. Warburton stated he felt any entity that is sponsoring weather modification activities ought to be eligible for membership in the Council to take part in the activities of the Council, whether it be affiliate, associate, or a full member.

Dale Bates feels the Council should not include for-profit entities.

Dr. Warburton recommended the Chairman reconstitute the By-Laws Committee and request they confer to determine if there should be a change in the wording of the by-laws in consideration of what types of organizations and category of membership should be available. The Committee should present a final recommendation to the Council at the annual meeting spring of 2004.

### WEB SITE

Chairman Langerud noted the Council web site is up and running. The North Dakota Atmospheric Resource Board is hosting the web site. The web site address is <http://www.naiwmc.org> .

### OUTREACH EFFORTS

Discussion was held on education and outreach efforts by the Council. Chairman Langerud asked those present what the Council can do to further education about weather modification in their state, and what efforts should the Council be making to reach others to join the Council.

Dr. Warburton recommended each state provide to the Council information regarding those organizations that would react favorably to information about what the Council is doing and the activities going on in each state. The Council could then put together a package and send it to these organizations. This could be used in many ways such as legislatures, insurance companies, etc.

Chairman Langerud stated having served as chairman for the past two years he knows that since the Council does not have any staff, it is impossible for the Chairman to do this for the member states. He suggested the Council could have a brochure made that each state could distribute as needed.

### STATE REPORTS

**Texas** – Ten projects will start this season, but will only have 7 operating projects by the end of August. These 7 projects cover 45 million acres and will operate with local funds only. It is hoped the state will be able to continue to fund the evaluation of the program.

**Nevada** – Arlen Huggins reported a larger than normal aircraft component was added to the project for 2002-2003. April has been an active month for aircraft operations. Seeding operations are overall higher than normal in the seeding areas. April has been a very wet month.

Nevada has received their funding from the Bureau of Reclamation but since it was received in late February, it was decided to delay the field measurements to the beginning of next winter and begin the proposed modeling studies on historical and current winter cases. Snow sampling sites have been selected and some snow sampling has been done this year, but the bulk of the samples will be taken next December and January.

**North Dakota** – Darin Langerud reported the program will remain unchanged from the previous year. Recruiting meteorologists continues to be an area of concern. Efforts were made to contact university atmospheric science departments this past winter to encourage applications of graduating students with degrees in meteorology. Further efforts in this area will be made again for next year.

The North Dakota Atmospheric Resource Board (NDARB) convened a panel of experts to review the project operations and safeguards procedures. The panel, Chaired by Dr. Harold Orville, presented its findings and recommendations in the form of a final report to the Board in March, 2003. The NDARB will be busy working to implement the panel's recommendations over the next couple years. Other activities include converting project recordkeeping from paper to digital for both aircraft and radars; improve forecasting accuracy using sounding data; and a timeliness study to determine if aircraft are seeding during the appropriate cloud phase.

**Utah** - Dave Cole reported the 2002-2003 winter season has five active project areas. A total of 130 ground generators are being used in this year's program. The total estimated cost for these projects is \$361,600 of which the state will pay \$150,000 (41.5%). Mr. Cole reported the snowpack is below normal this year for the 5<sup>th</sup> year in a row. Statewide reservoir storage is down 19% compared to last year. This amounts to approximated 640,000 acre-feet.

Recent studies by the Division of Water Resources estimated the average annual increase in runoff due to cloud seeding is estimated to be about 250,000 acre-feet for projects seeded during the 1999-2000 season. The estimated cost of the water developed was about one dollar per acre-foot.

**California** – Maurice Roos reported 12 projects are operating during the 2002-2003 season. The purpose of the projects is for water supply and hydroelectric power. The San Gabriel project in Los Angeles County decided not to operate this year due to fires in the canyons last year making them susceptible to erosion. Recent storms have brought moisture conditions to a much better level.

**Colorado** - Joe Busto, Colorado Water Conservation Board, distributed copies of a map depicting the target areas of the Colorado cloud seeding operations for 2002-2003. There are six on-going programs.

Chairman Langerud thanked Mr. Busto for his attendance and participation in the meeting and encouraged the State of Colorado to become an active member of the Council.

WEATHER DAMAGE MODIFICATION PROGRAM (WDMP)

Mr. Langerud reported the language in the bill for the FY2003 funding for the WDMP has not yet been clarified. The bill only lists participating states as Nevada, Oklahoma, and Texas. Mr. Langerud has been in contact with Rick Spees regarding clarification to allow eligibility of other states with on-going cloud modification projects. At this time it does not appear to be the intent of the committee to exclude states, but rather left over language in the bill.

On February 24<sup>th</sup> and 25<sup>th</sup> Council representatives from the states of North Dakota, Nevada, and New Mexico, along with a staff person from the Texas state office and Rick Spees, met with many state delegations and committee staffers regarding funding of the WDMP for FY2004.

Dr. Warburton reported he was in touch with a member of the National Research Council Committee on the Status and Future Direction in U.S. Weather Modification Research and Operations. Dr. Warburton was informed there were two earlier drafts of the document but now they have a final draft that is going out for review this week. It is expected to be published in May.

It was noted, at this time North Dakota and Nevada are the only states who have received their funding from the Bureau of Reclamation for the WDMP. Dave Cole reported Utah is making another iteration of their proposal. The Texas proposal is being reviewed at this time.

The tentative date for the next meeting is September 18, 2003, in Reno.

Being no further business, the meeting adjourned.

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DARIN LANGERUD, CHAIRMAN

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DR. JOSEPH WARBURTON  
SECRETARY-TREASURER

Transcribed by LeNor Dollinger