

NORTH AMERICAN INTERSTATE WEATHER MODIFICATION COUNCIL

Minutes

Fall Business Meeting: Flagstaff, AZ
September 29, 2008

The meeting of the North American Interstate Weather Modification Council was called to order by Joe Busto, Chair, on September 29, 2008, at 10am in a meeting room of the High Country Conference Center on the Northern Arizona University campus, Flagstaff, Arizona.

A roll call confirmed the following members present: Arlen Huggins, State of Nevada; Joe Busto, State of Colorado; Tom Ryan, Metropolitan Water District of Southern California; Darin Langerud, State of North Dakota; Dave Cole, State of Utah; Barry Lawrence, State of Wyoming; and Robert Sandbo, State of Oklahoma. This represented a quorum of seven of twelve voting members of the Council.

Others present were Chuck Cullom (Central Arizona Project), Pat Golden (Heritage Environmental Consultants), Rand Decker (Northern Arizona University), and Tammy Langerud.

MINUTES

The minutes of the Spring 2008 meeting of the Council were distributed and reviewed. There was no discussion.

Barry Lawrence moved to approve the minutes of the April 22, 2008 meeting.
Second by Dave Cole. Motion carried.

FINANCIAL STATUS REPORT

Arlen Huggins, Secretary-Treasurer, presented and reviewed the financial status report as of 9/29/08. The report showed a balance of \$23,452.09. Mr. Huggins noted that the Council account had been transferred from Citibank to Wells Fargo (due to Citibank closing offices in Nevada). The report noted the main account activity since the prior meeting consisted of six payments to Josh McClintock and two dues payments from California DWR and the Metropolitan Water District of Southern California.

Darin Langerud moved to accept the 9/29/08 financial status report. Second by Robert Sandbo.
Motion carried.

MEMBERSHIP REPORT

Arlen Huggins reported that as of 9/29/08 10 of 14 memberships have paid their dues for CY08, with three of these also paying all or part of the special research assessment. There was a brief discussion of activities in Idaho which had joined the Council for the first time in 2008. Barry Lawrence noted that the Idaho DWR had funded a cloud seeding feasibility study being conducted by North American Weather Consultants, and that the report on the study was coming out in October 2008. It was also noted that Idaho Power was proceeding with a cloud seeding pilot project in eastern ID, with the first field activities to be conducted this coming winter.

Chuck Cullom with the Central Arizona Project, a potential new member to the Council, gave a report on activities and interest in cloud seeding in Arizona. He noted that Arizona currently contributes funding to cloud seeding operations in the Upper Colorado River Basin, but that there is not much opportunity in Arizona for snowfall augmentation that would impact Colorado River runoff. He noted that the 2.8 million acre-feet of Colorado River water allocated to Arizona is delivered to urban Arizona via the Central Arizona Project canal. Cloud seeding potential is likely best over the Mogollon Rim where snowfall augmentation and runoff would impact the Salt and Verde Rivers, which would benefit rural areas of Arizona. A conference on weather modification is being conducted on Sept. 30 and October 1, 2008 (here at NAU) to address issues Arizona faces in developing a snowfall augmentation project. These include issues of technology, meteorology, evaluation and funding. Cullom noted that “non-structural water solutions” are being sought because they are potentially less expensive, and because there is no practical means of getting water from the Colorado River to the Mogollon Rim area of Arizona.

Dr. Rand Decker, NAU professor who organized the conference referred to above, gave additional details on what Arizona wanted to accomplish with the conference, and stressed the need to involve numerous Arizona organizations.

Late in the meeting Tom Ryan led a discussion regarding new members and Council membership categories. He mentioned the LA Dept. of Public Works as a possible new member since they were starting a new seeding project. The ski industry was discussed in terms of new memberships and also as another group to align with in promoting positive aspects of weather modification. Considerable discussion took place regarding our current member categories, and the possible inconsistency between Associate versus Full Member, when the state water agency was not a member. The concept of a non dues paying membership was also brought up again. It was decided to turn the issue over to the Bylaws Committee to review current definitions and to potentially bring up changes to be discussed and voted on at the Spring meeting.

NAIWMC Marketing Plan

The Strategic Marketing Plan discussed at prior meetings and developed as part of Tammy Langerud’s MBA degree was presented to the Council. Since copies of the Plan were distributed to the Council, only brief highlights of the Plan are noted here. The following are some of the summary points and recommendations from the Plan:

- The Council should consider updating its name and mission.
- Enhance the Council web site to improve the dissemination of information on weather modification.
- Develop new and improved fact sheet and brochure regarding weather modification.
- The Council should be cognizant of groups opposing weather modification, since these groups tend to fill in knowledge gaps if the actual facts are not being presented.
- It is important to get alliance groups to promote the advantages of weather modification.
- The Council should take a constant proactive stance on public relations and media relations.
 - Many detailed suggestions are provided in the Plan.
- The Council should consider the use of university students as one source of “free” marketing analysis.
- The Council should redesign its logo to improve its “product” image.

Regarding first steps in implementing the Marketing Plan, Council members generally agreed that upgrading the logo and our web page were two of the higher priority items and also ones that were economically feasible if our contract obligation with McClintock Associates was reduced.

CONGRESSIONAL ACTIVITIES

Josh McClintock, the Council's legislative consultant, joined the meeting by speaker phone. He reviewed what was currently happening in Congress, including the status of the weather modification bills. At the time of this meeting Congress was just beginning to structure the bills intended to bail out various financial institutions. It was thought that the bail out bill would affect all other bills with funding attached, but no bill had as yet been passed. It was noted that the upcoming national election would have a marked effect on pending legislation, but what the effect would be was uncertain.

It was noted that neither the Senate or House version of the weather modification bill received a hearing in the 110th Congress, nor it was very likely that this would happen in the short time prior to the election. McClintock viewed the best chance for the weather modification bill to move forward would be as part of one of the proposed climate change bills. It was thought best to wait for the election results to determine what delegation it might be best to approach regarding sponsorship of the bills. There was additional discussion about the best federal agency might best house the program, but no new ideas were presented. The Arizona attendees noted that AZ senator Kyle was knowledgeable in water resource issues, and needed to be convinced of the usefulness of the potential Salt River program. It was thought he would be supportive if this happened.

Following the discussion on congressional activities, there was a discussion on how Council expenses should be divided between marketing and legislative education. It was generally agreed that henceforth the Council should spend more on self-marketing with an accompanying decrease in legislative education expenses. As a result,

Tom Ryan made a motion to give the Chair (Joe Busto) the authority to terminate the current contract with Josh McClintock and to renegotiate a new contract at \$1500 per month.

Second by Barry Lawrence.

Tom Ryan amended the motion to give the Chair (Joe Busto) the authority to terminate the current contract with Josh McClintock and to renegotiate a new one year contract at \$1500 per month.

Second by Darin Langerud. Motion carried.

STATE REPORTS

State reports were given by each member present at the meeting. Copies were made available to members present, so only brief highlights are included in these minutes.

Arlen Huggins noted that the main issue in Nevada was the uncertainty in state funding for the continuation of the operational seeding program conducted by DRI. This was brought on by the shortfall in state tax revenue, and by a proposed cut in university funding by as much as 35% for the biennium beginning July 1, 2009. Huggins also noted that a statistical evaluation of eastern Sierra Nevada projects using streamflow data was also likely to have a detrimental effect on the project, due to its lack of positive results. He noted several problems with the *posthoc* evaluation including contamination by upwind projects, the lack of a clearly unseeded control area, and the use to stream gages that represented flow from very large areas outside the basins that are typically targeted by seeding operations. Dave Cole noted an additional problem of stream gages having an error of 5-10%, which is in the range of seeding effect that is being assessed.

Darin Langerud reported on fairly routine operations for the North Dakota program that included five counties and part of a sixth in the summer of 2008. He noted that the ARB was in the process of upgrading both of their 5-cm radars to include Dopplerizing both units, improved severe weather detection and remote operation. The POLCAST research continued in 2008 with

13 additional randomized cases investigated using the UND C-band dual polarization radar and a WMI instrumented Cessna 340.

Robert Sandbo noted that Oklahoma still had no active cloud seeding programs, and that this past year rainfall had been ample. He didn't foresee the initiation of any new projects in the near future.

Barry Lawrence summarized the status of Wyoming's 5-year cloud seeding project at the end of its third season. At this point the randomized project has collected 26 cases, with the estimate being that 166 cases would be needed to see a 15% effect, and as many as 300 cases to see a 10% effect. He noted that seeding criteria may be too stringent and that these criteria may be relaxed somewhat in order to obtain more cases. He indicated that it is possibly that the project could also be extended by an additional season to increase the number of cases, and that the Wyoming legislature was proactive in suggesting this. Barry noted the importance of the piggy-back research that is being conducted by U. of Wyoming investigators: microphysical studies using an airborne cloud radar by Bart Geerts, and impacts on streamflow due to cloud seeding activities by Glenn Tootle. Updates on current instrumentation deployed by the project and the latest environmental issues that have been resolved were included in the report.

A report sent to the Chair by Diane Coe of Kansas noted that activities in Kansas had not changed significantly, that there was still only one active summertime program in southwest Kansas.

Dave Cole of Utah distributed a report summarizing the 2007-08 seeding program in Utah. Utah had five main project areas with estimated precipitation increases due to seeding of between 2% and 18%, with a weighted average of +14%. The summary report indicated that total expenditure was \$421,039, divided equally between the state and local sponsors. In addition, Utah received \$60,842 from Lower Colorado River Basin states to extend seeding operations in Central/Southern Utah and the Uinta Mountains which contribute flow to the Colorado River.

Activities in Idaho were noted at the beginning of the meeting under Membership discussion.

Joe Busto gave an overview of the six Colorado winter seeding projects and reported on the Upper Basin/Lower Basin weather modification agreement. A table included in his report showed the distribution of funds for the Upper/Lower Basin cooperative weather modification project for WYs 2006 through 2008. The Lower Basin funding contribution reached nearly \$296K in WY2008. The Colorado portion of this is expected to include a new remote seeding generator for the Southwest Water Conservation District.

COMMITTEE ACTIVITIES

Travel Committee - No requests were received – nothing to report.

By-Laws Committee – No proposed changes – nothing to report.

Scholarship Committee – Nothing new was reported.

PUBLIC RELATIONS & OTHER

Public relations items were discussed in association with the report given by Tammy Langerud on the Strategic Planning document.

NEXT MEETING

It was agreed that the next meeting of the Council would be held sometime between 21 and 24 April 2009, in conjunction with the WMA Annual Meeting in Anaheim, CA.

Being no further business the meeting adjourned at about 6 pm local time.

A handwritten signature in cursive script that reads "Arlen W. Huggins" followed by a horizontal line.

ARLEN HUGGINS, Secretary-Treasurer