

57th Annual Meeting

Western Snow Conference

April 18-20, 1989
Fort Collins, Colorado



PROCEEDINGS
OF THE
WESTERN SNOW CONFERENCE

Fort Collins, Colorado

April 18-20, 1989

FIFTY-SEVENTH ANNUAL MEETING

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MINUTES OF THE EXECUTIVE COMMITTEE
WESTERN SNOW CONFERENCE
FORT COLLINS, COLORADO

The 57th meeting of Western Snow Conference Executive Committee was called to order at 12:25 am, April 18, 1989, by the General Chairman Robert Swanson. Before the actual business of the Western Snow Conference Executive Committee began the General Chairman asked for the proxies represented at the executive committee meeting. Neil Berg, South Pacific, was represented by Bruce McGurk; William Fecke represented Bernie Shafer, South Continental; Chris Pacheco represented Bob Whaley, North Continental. Barbara Sarantitis represented Norbert Leupold, North Pacific; Don Huffman represented Doug Golding, North Pacific; Tom Henderson represented Margaret Hannaford, South Pacific. The first item of business was the reading of the minutes of the 56th meeting of the Conference Executive Committee. Jim Marron, Executive Secretary, made the motion that the minutes be accepted as published in the proceedings of the Western Snow Conference in 1988. The motion was seconded by George Leavesley. A call for a vote was made and the motion passed unanimously. The next item of business was the financial statement for 1988. The treasurer's report was provided to the executive committee on the back side of the agenda of the Executive Committee. Jim recognized that Phil Farnes was concerned with the outcome of the 1988 meeting in Kalispell, Montana. Jim stated that due to an oversight the budget for the meeting was \$5.32 short because the cost of the printed agenda had not been included in the calculations for the cost of the meeting. Art Crook pointed out that the financial report for the 1988 meeting was incorrectly dated 1987. Both Chuck Troendle and Art Crook wanted to know if this in fact was the 1987 financial report. Jim Marron assured the members of the Executive Committee that it was in fact for the 1988 meeting. Art Crook then moved that the financial report be accepted as presented. The motion was seconded by Doug Speers, North Pacific Area. Doug Speers asked if a balance of 5000 plus dollars was normal carry over, and what would be done with that carry over. Jim Marron stated that the normal carry over is about 3000 dollars but that carry over diminishes quickly when payment is made for the proceedings. Jim said the current balance also shows about 1700 dollars that was actually prepayment for the 1989 meeting. Jim also pointed out that the books still show outstanding invoices for a total of 824 dollars mainly from overseas purchasers of the WSC Proceedings. These billings are difficult because they can take as long as six months to go through appropriate channels. A vote was then called on the motion to accept the treasurer's report. The motion was passed unanimously.

Publication Committee Report: Chuck Troendle

Chuck first reported on a proposal by Jim Marron to have a commercial entity store and disseminate the back issues of the proceedings in the future. It had been thought that Colorado State University would be willing to do this for the Western Snow Conference. Colorado State said that they would store and disseminate internal documents but would not external documents. George Washington University and/or Montana State University may still represent an opportunity for this kind of arrangement. The proposal would allow us to charge 20 dollars for back issues and allow the entity that might handle the documents to retain that 20 dollar fee. The Desert Research Institute may also represent a possibility. Maurie Roos has volunteered to check that potential alternative. The annual income from this activity is approximately 1500 dollars. Chuck was appointed to investigate the filming of the back issues of the proceedings with the ultimate goal of keeping only the 5 most recent years in hard copy and the remaining would be distributed as microfiche or some other media. The ultimate process would be to establish an agreement with a mailing house, for example in Fort Collins, that would handle all orders. This would also become the permanent mailing address of the Western Snow Conference.

Jim Marron stated that the current storage consumes about half of the income from sales of back issues because of the size of the facility required. The proceedings sale held this last March had limited response reducing the back issues only slightly. Jim asked if it would be acceptable to reduce the count of any individual year down to 40 or 50 copies. This would somewhat reduce the quantity of back issues currently on hand. Bob Richards, North Pacific Area Canada, stated that the British Columbia Snow Survey Branch kept only 25 copies of the current publication on hand.

The General Chairman recognized Neil Berg for his recommendation to put the date and title on the binding of each year's proceedings. This makes them much easier to identify and use.

Jim Marron pointed out that there currently is no lack of bibliographies in the storage area but they are significantly out of date; 1973 is the last update. There is currently no room in the existing binder for additional bibliography pages. The surplus three ring binders could be used to provide the updated pages. Jack Hannaford stated that it would be very valuable to have an updated bibliography but we would need a volunteer for that job. Maurie Roos suggested that the executive committee ask for a volunteer at the business meeting. Bob Richards asked how long it might take someone to update that bibliography. Bob Richards then stated that he would like to talk to the publication committee about working on the updated bibliography. The binders will be retained until a resolution to the bibliography problem can be worked out.

Wilderness Committee Report: Jack Hannaford

The Wilderness Committee composed of Jack Hannaford, Clay Brandow, and Hal Klieforth have composed a Wilderness Resolution for consideration by the Executive Committee. Jack wanted two things from the Executive Committee: 1) the acceptance of the draft of the Wilderness Resolution, and 2) to get some directive to put that resolution in terms of a plan of action. Jack then asked for any comments from the Executive Committee. Phyllis Snow stated that the general attitude of the Flathead National Forest was to exclude hydrologic and meteorologic activities because it was just easier to manage. Jack Hannaford pointed out that the real target of any resolution must be the congress who has the only power to clarify and improve the current situation. George Clagett recommended that we locate a Western Congressman that would in turn take the resolution to Congress to sponsor a change in legislation to clarify the Wilderness Act of 1964. Phil Farnes suggested that a more appropriate action might be to take the resolution to the National Association of Conservation Districts for their support and lobbying abilities. Jim Marron volunteered to contact Bob Rashke as the Water and Conservation Committee representative. Bob's office is in Denver and Jim stated that he would contact Bob before returning to Portland. Art Crook made a recommendation that the resolution be modified to ask for an amendment to the Wilderness Act recognizing the need for hydrological and meteorological measurement. Jack Hannaford then made a motion that the resolution be accepted and appropriate action be taken by the Wilderness Committee to forward this resolution to and through the appropriate channels. The motion was seconded by Phyllis Snow. A vote was then taken on the resolution which passed unanimously. Jack Hannaford was concerned about formulating a plan of action to get the resolution into the appropriate hands for action. Jim Marron was volunteered to ask Bob Rashke about further contacts that should be made to forward this resolution. Jim will be in Denver during the week of April 24th and would have the opportunity to contact Bob during that time. Chris Pacheco recommended that the State Associations of Conservation Districts should be contacted so that lobbying efforts could be made in the individual states.

1990 Western Snow Conference Annual Meeting: Bruce McGurk for Neil Berg

On behalf of the 1990 Conference Committee (Margaret Hannaford, Gary Freeman, Ron Jones, and Neil Berg). Bruce McGurk stated that arrangements for the 1990 meeting were well underway. The theme of the meeting is Coping with Extremes and the announcement of the meeting is being published in a large number of journals so that word of the meeting and submission of papers should have a much wider distribution and, we hope, response. The hotel has been arranged and is the Radison Hotel and Convention Center in Sacramento. The committee members were provided a snappy brochure which carefully avoided the mention of the Radison Hotel in Sacramento. The hotel is not ready and is currently being refurbished. It is located at a very nice location in an area of luxury hotels. The rates are acceptable, if not wonderful. The arranged rates are 55 dollars (single) and 65 dollars (double). The location is very close to everything with a complimentary shuttle service to and from the airport. The facility is very large and our Conference will not strain the accommodations in any way. The tour has not been arranged but the opportunities are many. The General Chairman asked Bruce about the desk top publication of the 1990 proceedings. Bruce was not aware of the electronic publication aspects of the meeting. The General Chairman then asked for any comments or recommendations for the meeting.

Chuck Troendle then addressed the electronic publication proposal made by Neil Berg. Neil Berg suggested that he would like to use electronic publication to do the proceedings for 1990. Chuck had a concern that doing the proceedings in this way would set a precedent that the area chairmen would be responsible for proceedings preparation. He would like to have clarification on whether this would be a one time trial or was there potential to continue to produce the proceedings in this way. Chuck checked with the Rocky Mountain Station Director about having the Rocky Mountain Station produce the proceedings electronically on a long term basis. The Director was not interested in a long-term publication arrangement with the Western Snow Conference. There remain questions about the difficulty in getting all the documents in and preparing the documents for publication. Currently the publication is completed within the current fiscal year, which is important to institutional researchers. The current arrangement allows this to occur but there is some doubt whether the desk top publishing method would be able to complete the process as quickly. The General Chairman had a question as to what Chuck meant by desk top publishing. Chuck stated basically that what he meant was that each document would be processed through a single word processor providing a very consistent appearance to the document. Bruce McGurk stated that Neil is currently doing this for the California Watershed Council. It requires that each paper be provided on disk with camera ready figures. The publication section then goes through the documents on disk and prepares the figures and document for final publication. This process produces very nice proceedings but is a headache because of the effort required to read the numerous word processor documents. Bruce's basic question "is it worth the large effort involved to have better looking proceedings?" Electronic publishing is the future but do we want to participate now. The General Chairman made a proposal that Neil should go on with his plans to publish the proceedings electronically in 1990 but that it would not imply anything for future publications. Neil will be producing the document on a laser writer system through a MacKintosh Computer. Tom Henderson pointed out that California's experience with desk top publishing efforts of this sort indicate a very large number of incompatible word processing systems which make it almost impossible to bring all the documents together. Desk top publishing takes a significant amount of time to prepare the finished document. He made two additional points. First, desk top publishing makes it easier for the individual to prepare a submission and secondly it upgrades the quality of the product. Tom Carrol asked what electronic publishing would mean to the authors. Figures and tables are difficult. Bruce McGurk explained that all figures, pictures and tables were provided as hard copy and then reduced or changed to fit the publication. The Western Snow Conference beats the turn-around by requiring camera ready copy on short turn-around. Desk top publishing is very expensive and time consuming. Art Crook pointed out that one of the advantages of going to desk top publishing would be the routine updating of the bibliography. Desk top publishing may be beyond the Conference's means as a whole right now but the ultimate advantages may be worth the risk. The General Chairman pointed out that if the Conference were to go to desk top publishing the proceedings could be placed on the Compact Disk medium which could then hold all of the proceedings published to this point. The General Chairman then summed up by stating that Neil Berg, at his discretion, can proceed with publication of the 58th proceedings electronically and to provide a summary of his experiences to the Executive Committee from which a direction for the future can be decided. This action would not be binding for any of the future meetings or chairmen. Bruce McGurk wanted to know if there is an interim way of finding out the cost and delay times, if any, for electronic publishing. Bruce pointed out that if we maintain the same schedule and the disks and figures at the Conference, there may be a one or two month delay in preparing the camera ready copy. The General Chairman pointed out that if it is going to be a worse system from the beginning then why even use it. Several other systems are being used and developed and the Western Snow Conference needs to keep its ear to the ground and its eyes open to the opportunities. Neil Berg's first attempt may be the Conference's first step. Bruce McGurk will follow up with Neil and report the difficulties being faced by Neil with the California Watershed Council. Art Crook, as a final comment, stated that one of the reasons to go to desk top publishing would be to improve the quality of the report. He continued that in his opinion the Western Snow Conference had no apology to give for the quality of the current proceedings.

1991 Western Snow Conference Annual Meeting: George Clagett

George opened by commenting that the investigation to hold the Western Snow Conference had been a fun exercise. He began by contacting the convention centers of three cities in Alaska, Juneau, Anchorage, and Fairbanks. Juneau sent a large box full of samples and George will give these to the General Chairman to distribute and use as he sees fit. Anchorage sent

a large bid package which is available for everyone to review. Fairbanks sent a brochure. Therefore, Juneau seems to be the best site for the 1991 Western Snow Conference Annual Meeting. In 1974 the Conference was held in Anchorage and it was a big success. Since it has already been in Anchorage once, Juneau is the logical choice. In addition Juneau has several advantages in terms of facilities, hospitality, and additional attractions before or after the Conference. George reviewed with the Executive Committee the several opportunities for trips before and after the Conference. George informed the committee that Doug Speers was recommending that the meeting be held on the ferry boat going to Juneau. The 1991 Meeting Committee moved that the 1991 meeting be held in Juneau, Alaska. The General Chairman then asked for a second. Doug Speers seconded the motion. Tom Carrol was very interested in holding the meeting on the ferry to or from Juneau. George stated that he was going to investigate the possibility on his return to Alaska and will report on progress at the next executive meeting. Maurie Roos asked about the cost of flying to Juneau and George informed him that it was about 70 to 100 dollars cheaper than the airfare. George then provided some other costs. From Seattle to Juneau today the flight would cost 341 dollars; from Portland, 366 dollars; from Salt Lake City, 453 dollars; and Denver, 475 dollars. These prices are all super save fares purchased 14 days in advance. The General Chairman asked if there had been some consideration given to changing the dates of the Conference so that the Conference, for example, would end on Friday and give the attendees the opportunity to take advantage of the vacation opportunities. Barbara Sarantitis then asked what the ferry fare was. Phyllis Snow said she was relatively certain it would be about the same as the airfare to Juneau. Cars are significantly more expensive. The General Chairman then called for a vote to accept Juneau as the location for the 1991 Western Snow Conference Annual Meeting. The motion passed unanimously. George is instructed to investigate the possibility of holding the Conference meeting on the ferry to or from Juneau and to move the meeting date closer to the weekend to facilitate vacation opportunities.

Awards Committee Report: Jack Hannaford

The first order of business was a recommendation that a bolo tie be developed that would recognize the past recipients of the El Farsante award. Since it was felt that these individuals deserve special recognition for their well-deserved contributions to the Art of Water Supply Forecasting. Jack Hannaford then suggested that it was bad enough that you had to have the thing on your desk without having to wear a bolo tie recognizing your transgression. A possible bolo example will be developed but no motion was presented at the executive meeting to promote the bolo.

The next piece of business is the J. E. Church award. Chris Pacheco reported that Reno High School had been contacted and that the recipient had not been decided on yet. Chris said that he would try to have the name in time to announce it at the banquet.

Jack Hannaford opened the remainder of the awards report by assigning the responsibility of forming a list of retirees and deceased members to be returned to Jack Hannaford or Jim Marron before the business meeting. Jack then informed the Area Chairmen that there would be a meeting following the business meeting to address the El Farsante Award. Each area chairmen would be expected to prepare a presentation at the banquet. Of course that speech would be limited to 30 minutes.

Gerry Beard informed the Executive Committee that Jack Wilson, former General Chairman, passed away last August and that he would like to make a motion that the 57th proceedings be dedicated to Jack. Jack joined the Western Snow Conference in 1957 and served as the General Chairman in 1981 and 1982. Jack had been with the Soil Conservation Service Snow Survey Unit in Idaho since 1949. The motion was seconded by Barb Sarantitis. The vote was called for and was passed unanimously.

Jack Hannaford then wanted to recognize the fact that Bob Dahl of the Hetch-Hetchy Water Conservancy District passed away this year. Jack stated that Bob had been a supporter and member of the Western Snow Conference for longer then Jack could remember and that there should be a recognition of his contributions. The General Chairman agreed and stated that the proceedings would recognize Bob.

Each of the Area Chairmen reviewed the current list of retirees and deceased members to be relayed to the business meeting.

Art Crook then brought the Executive Committee up-to-date on Manes Barton, past General Chairman of the Western Snow Conference. Manes is currently in a hospice in Portland, Oregon, and the prognosis is not good. The appropriate information for letters will be brought up at the business meeting for the general membership.

Student Chapter Committee Report: George Leavesley

George reported that he had contacted the American Society of Civil Engineers and had received the Society's Student Chapter Handbook. This handbook is a how-to book to form a student chapter. The students then form their chapter which is approved or disapproved by the Society. The material is finally returned to the Institution for its concurrence and formation of the student chapter. After the student chapter is established and has a faculty advisor, the chapter is then self sustaining and only reports back to the Executive Committee as to it's activities. The General Chairman stated that the Committee should continue its work because student chapters can do a lot to promote the Conference and attract good scientists.

New Business: General Chairman

The first item under new business was the establishment of treasurer as a new office within the Western Snow Conference. Jim Marron related that it would be advantageous to the Western Snow Conference to have someone directly responsible for the books of the Conference. It also provides two heads to run the day to day operations of the Conference. We do have one volunteer, Barbara Sarantitis, who would like to become the first treasurer of the Western Snow Conference. Jim then made the motion that the Conference establish the position of treasurer of the Western Snow Conference and open up nominations for that position. The second was made by Bruce McGurk. The General Chairman then opened the motion up for discussion. Chuck Troendle then asked if this change would require a change to the bye-laws of the Conference. Jim Marron stated that the by-laws would in fact have to be changed but several changes are currently needed for other purposes and would not add an additional burden. Gerry Beard then asked if we could get around the by-laws change by calling it an assistant secretary-treasurer. The General Chairman stated that he did not believe that was necessary and that we would work on the necessary changes to the by-laws but could establish the position until those changes were made. The General Chairman then called for a vote on the motion which passed unanimously. Gerry Beard moved that the nomination cease. Barbara Sarantitis became the first treasurer of the Western Snow Conference by acclamation. The General Chairman then offered his congratulations and condolences.

The second item of new business was the proposal for a membership certificate to replace membership cards. Membership cards are difficult and not very usable. Jim Marron is in the process of developing a certificate of membership that can be displayed that would have stickers down the right side showing the individuals current membership. The certificate would also show the year the individual joined in the upper right hand corner. Jim then made the motion that a certificate of membership replace the membership card. The motion was seconded by Tom Henderson. With no more discussion a vote was called for and passed the motion unanimously.

The third item of new business concerned a joint meeting with the Eastern Snow Conference in 1993 for their 50th Anniversary. The General Chairman reminded the Executive Committee that the Eastern Snow Conference joined the Western Snow Conference in 1982 to celebrate the 50th anniversary of the Western Snow Conference in Reno, Nevada. The General Chairman also expressed the feeling that the Western Snow Conference was under an obligation, if not to attend, to at least consider attending the Eastern Snow Conference's 50th Anniversary. Jim Marron then read a letter from the Eastern Snow Conference inviting the Western Snow Conference to its 50th Anniversary Meeting. The meeting was tentatively planned for either Niagara Falls or Atlantic City. The meetings of the Eastern Snow Conference are normally held the first week of June. Jim also pointed out that the Eastern Snow Conference was a member of the South Continental Area. Jack Hannaford made the motion that the secretary pursue our attending the 50th Anniversary meeting of the Eastern Snow Conference. George Leavesley seconded the motion. The General Chairman then opened the floor to discussion. Art Crook then asked if this meeting would be the 61st meeting of the Western Snow Conference or would we have our usual meeting that year. The motion is that the meeting with the Eastern Snow Conference would be the annual meeting of the Western Snow Conference. Jack then pointed out that the motion was only to pursue attending the meeting but that if

some difficulties arise the whole notion could be dropped. George Clagett asked how many attendees from the Eastern Snow Conference were at our 50th meeting. Jim Marron only relayed that the Eastern Snow Conference contribution to the papers presented was significant and that an expanded number of papers were presented to accommodate the large number of attendees. The decision to attend would not have to be made before the next meeting of the Western Snow Conference. The Eastern Snow Conference is still in a position to select a mid-western city to hold the meeting that would facilitate our attendance. The General Chairman then called for a vote on the motion which passed unanimously.

The fourth item of new business concerned the 1992 meeting of the Western Snow Conference. The normal rotation would then put the 1992 meeting in the North Continental Area in Alberta or Saskatchewan. That would mean that three meetings in a row would be outside of the conterminous Western US. This could mean the possibility of two financial failures in a row. The General Chairman then recommended to the North Continental Area that they consider a rotation to Wyoming and then to Alberta/Saskatchewan on the following turn of the North Continental Area. Gerry Beard then made the comment that the North Continental delegates had met, recognized the problem, and were considering the change recommended. Gerry Beard stated that the North Continental area will consider the situation and come back with a recommendation at the next executive meeting.

The final item of new business concerned the structure of the fees we are currently charging for purchase of the proceedings. Currently we have corporate members and purchasers. Jim Marron is recommending a change to those fees by transferring purchasers who have standing orders to supporting members or Corporate Membership and that those who order only one time or billed-type orders remain as purchasers only. The fee for a one-time purchaser should be 25 dollars per year and the Corporate Membership should be 20 dollars per year or a 20 percent discount. The General Chairman then restated the motion saying that direct sales would be 25 dollars and that standing orders or Corporate Members would receive a 20 percent discount. George Leavesley seconded the motion. Art Crook asked if the purchasers to be converted were those having standing orders. Jim clarified by stating that he would like to convert the purchasers who have standing orders to Corporate Members and give them a 20 percent discount. The vote was then called for and passed unanimously.

A motion to adjourn was made by George Clagett. The meeting of the Executive Committee was adjourned at 3:23 pm April 18, 1989.

MINUTES OF THE BUSINESS MEETING
WESTERN SNOW CONFERENCE
FORT COLLINS, COLORADO

The annual business meeting of the Western Snow Conference was called to order by the General Chairman, Robert Swanson, at 3:30 pm on April 18, 1989. The General Chairman noted that the Western Snow Conference has a rookie General Chairman every two years and that this is the rookie year. Jim Marron, Secretary, moved that the minutes of the 56th meeting of the Conference published in the 56th proceedings be accepted as published. The motion was seconded by Rob Hartman. A vote on the motion was called for and the motion was carried unanimously. The financial report was then read to the general membership. Jim Marron reported that Phillip Farnes was concerned last year that the Kalispell meeting would make money. It was reported to Phil that the meeting would have about a 300 dollar profit. At the close of business this year we determined that the meeting actually lost \$5.32 because of the agenda publication costs. The agenda publication was not included in the calculation of meeting expenses, resulting in the overrun. On April 1, 1988, the balance on hand was \$3265.33; the ending balance on March 31, 1989, was \$4889.24. There are outstanding invoices for a total of \$824.00 mainly due to overseas proceedings purchasers. These billings can take as long as 6 months to clear through the appropriate channels. A motion was made by Jim Marron to accept the financial report as printed. The motion was seconded by Chuck Troendle. A vote was called for and passed unanimously. The chairman then relayed to the general membership that the Executive Committee had voted on establishing the position of treasurer and had nominated Barbara Sarantitis as the first treasurer. The General Chairman then moved that the motion to establish the position and install Barbara as the first treasurer be accepted. The motion was seconded by Chuck Troendle. The vote was then called for and passed unanimously.

Publication Committee: Chuck Troendle

During the Publication Committee discussions several items were brought up associated with storage of the publications. The first thing had to do with the bibliographies. We currently have many cases of three ring binders for the bibliography. In addition the bibliography itself is 16 years out of date. The first thing the Publication Committee will do is investigate getting the bibliography brought up to date. The publication committee will be looking for a volunteer to work on the update of the bibliography. The job involves about 24 titles per year for 16 years. Chuck asked for volunteers at the business meeting.

In addition to the bibliographies the Western Snow Conference is developing a significant backlog of past proceedings. The job of selling back issues is becoming quite large. The committee is going to look into the housing of the last five years of the publication in hard copy and having the back issues on microfiche. The Western Snow Conference would then find a vendor to handle the proceedings in this manner. This would reduce the storage costs and lighten the load on the secretary.

The Publication Committee, as well as the whole Western Snow Conference, would like to recognize Neil Berg for his recommendation of placing the proceedings number as well as the year on the publication binding. This makes it much easier to identify the proceedings you might want when stored on book shelves.

Awards Committee: Jack Hannaford for Bob Brown

Most activities of the Awards Committee of course occur at the annual banquet. The Doctor Church award is yet to be announced.

Wilderness Committee: Jack Hannaford

At the Western Snow Conference meeting in Kalispell, Montana, the General Chairman assigned a committee of three to formulate a revised Western Snow Conference Resolution on Wilderness. The committee was composed of Hal Kleiforth, University of Nevada, Reno, Clay Brandow, from an undisclosed Federal Agency; and Jack Hannaford, Sierra Hydrotect, Placerville, California. Clay Brandow worked very hard on the revised position paper. In

essence the position paper will ask for an amendment to the Wilderness Act of 1964 that will specifically allow the measurement of hydrologic and meteorologic characteristics within the wilderness areas for management purposes. The position paper was approved by the Executive Committee with one minor modification. Jim Marron will be contacting Keith Rashke of the National Association of Conservation Districts to establish a strategy to get the position paper to the right places to effect a change in the policy.

RECOGNITION OF DECEASED AND RETIRED MEMBERS

North Continental Area: Gerry Beard

Mr. Chairman it is with regret and sadness that I report the death of Jack A. Wilson who passed away last August at the age of 65. He was the Snow Survey Supervisor in Idaho and a past General Chairman of the Western Snow Conference, 1981 and 1982, joining the Conference in 1957. The 1989 Western Snow Conference Proceedings are being dedicated to Jack Wilson.

South Pacific Area: Bruce McGurk

"Mr. Chairman, as representative of Neil Berg, the Chairman of the South Pacific Area, we would like to recognize three members who are recently deceased. Robert Gerdel formerly of the US Bureau of Reclamation during their cooperative snow investigations, played a major roll in research at the Central Sierra Snow Lab currently operated by the US Forest Service. Robert died on March 27, 1987. Robert Dahl was Chief Hydrographer for the Hetch-Hetchy water district City of San Francisco. Mr. Dahl died January 10, 1989. Erving Ingerson of Sacramento was a long time head of the California Snow Survey Program. Erve built the first radio reporting streamgauge.

"In addition the South Pacific area would like to report on two retirements this past year. Robert Brown of Southern California Edison and current Awards Committee Chairman retired this year. Ray Sherrets also retired this past year. Ray was a hydrographer with the Sacramento Utility District."

North Pacific Area: George Clagett

George Clagett announced that Chauncey Beach from Seattle, Washington, a Hydrologist with the National Weather Service passed away September 7, 1988. Chauncey had appreciated the receipt of his life time membership. George read a letter received from Mrs. Beach thanking the Western Snow Conference for his life time membership and wishing the Conference success in Fort Collins.

South Continental Area: George Leasvesley

George recognized two deceased members in 1989: Borj Fistrup, one of our foreign members from Greenland, and William Sammons of the US Soil Conservation Service, Washington, D.C. George also announced one retiree this past year, Mr. Livingston Lansing.

General Chairman's note

The General Chairman along with Art Crook, General Chairman 1987 and 1988, then updated the members on the condition of Manes Barton, past General Chairman of the Western Snow Conference. He is currently in a hospice in Vancouver, Washington, and cards and letters to him would be greatly appreciated. David Johnson, Soil Conservation Service had a card available for members to sign from the Western Snow Conference to be sent to Manes from Fort Collins.

The 1990 Western Snow Conference Meeting: Bruce McGurk for Neil Berg

The theme of the 1990 meeting will be Coping with Extremes. The meeting will be held in Sacramento, California. The South Pacific Area committee has done a lot of work. The members of that committee are Margaret Hannaford, Ron Jones, Maurie Roos, and Gary Freeman. The hotel facility has been selected. It is the Radison Hotel which is undergoing renovation and should be ready before we get to the facility. It is located in an area of fancy hotels called Leisure Lane and is situated on a small lake which the hotel raps around. It has all the appropriate accouterments including a large business center and shops. The hotel is

approximately 15 minutes from the airport and 5 minutes from the Capitol. The call for papers is out in approximately 36 journals and newsletters so the committee is actively trying to spread the word on the upcoming conference. Rates are moderate to high depending on taste and range from \$55 (single) to \$65 (double). "We hope you will all join us in 1990."

The 1991 Western Snow Conference Meeting: George Clagett

Juneau, Alaska has been selected as the 1991 meeting location. The meeting date will probably be moved one or two days out of sync to allow for transportation to and from the location. A good option for this conference would be to plan a vacation around Juneau. A very popular method of transportation is to take the ferry from Seattle, Washington to Juneau which takes roughly 5 days for the round trip. The conference lasts for three days. The total trip would then last 8 days. Rates are reduced at that time of year. Local attractions include the inland ferries to many of the smaller cities, the scenic ferry to Glacier Bay, or the trip to Skagway for a look at the historic mining area. One possibility is to have the Conference on the ferry to Juneau, Alaska. This last idea has not been fully investigated but will be before the next meeting of the Western Snow Conference. A promotional video was also shown as part of George's presentation.

George will provide much more information on transportation costs prior to next year's meeting, but some current airfare prices to Juneau are \$341 from Seattle, \$366 from Portland, \$453 from Salt Lake City, and \$475 from Denver. The Ferry is approximately \$300 round trip from Seattle. George will be reporting next year on all the aspects of the Conference meeting in Juneau.

1993 Western Snow Conference Meeting: General Chairman

A letter of invitation has been sent from the Eastern Snow Conference asking that we join them in 1993 in celebration of their 50th year. The Eastern Snow Conference joined the Western Snow Conference in celebration of their 50th anniversary in 1982 and the Eastern Snow Conference would like to reciprocate. The Eastern Snow Conference is presently considering Niagara Falls or Atlantic City for the meeting site. The Eastern Snow Conference meetings are held in the first week of June each year. The Executive Committee will respond favorably to this invitation to the Eastern Snow Conference meeting.

1992 Western Snow Conference Meeting: General Chairman

The 1992 meeting is scheduled for the North Continental Area in Canada probably in Saskatchewan. Because of the invitation to the Eastern Snow Conference and because of the probable meeting in Alaska that would make three meetings in a row outside of the conterminous Western US, the site may need to be changed. One of the probable changes will be to change the rotation so that the North Continental will hold the Conference in Wyoming and then the rotation would move to Saskatchewan in 1996. More details will be provided at the next meeting of the Conference.

Membership Certificates: General Chairman

The old membership card is difficult to make and does not adequately represent our pride in the organization. Jim Marron has recommended that we have membership certificates developed that would allow us to display our current membership. The certificate would show the year in which we joined and each year an update sticker would be sent to add to the certificate showing current membership.

New Business: General Chairman

Two changes were made to the policy of purchasing proceedings as a result of Executive Committee actions. First, one time purchases of proceedings will now cost \$25.00 per copy, and second, if the purchaser places a standing order, the purchaser will become a corporate member and the cost of the proceedings will carry a 20 percent discount or \$20.00 per copy.

Robert Hartman stated that the current publication policy of the Western Snow Conference is to publish all results in SI units. Mr. Hartman made a motion that the publication policy be changed so that the selection of publication units be at the author's discretion. The

motion was seconded by George Clagett. Many of the members seemed to be both pro and con to the change, during the discussion. Phil Morrisey of the Soil Conservation Service brought up the importance of our overseas purchasers and the fact that use of SI units is virtually accepted by most other nations in the world. George Leavesley made two comments; first, the status of the Western Snow Conference Publication could be damaged by a change to non-SI units and second, the publication itself could stay in SI units, with the presentation at the author's discretion. Mr. Hartman made the additional point that the SI units are not understood by many attendees and that the amount of technical information shared at these meetings should be as understandable to the listener as possible. The point was also made that in 1992-93 the US was scheduled to switch to SI units and that both units could be used until that change is made. George Leavesley suggested that the conversion table from SI to English could be published in the proceedings facilitating conversion from one unit to another but publishing SI units. The motion was withdrawn and will be forwarded to the Executive Committee for a recommendation.

The 57th Annual Meeting of the Western Snow Conference was adjourned at 4:45 pm by the General Chairman.

BANQUET HAPPENINGS:

The banquet at the 57th annual meeting was very successful. Awards were given to Dr. Geoff Kite, Hydrometeorological Research Division, Saskatoon, Saskatchewan, Canada, for the best paper presented during the technical session. The title of that presentation was "Hydrologic Modeling with Remotely Sensed Data." Keith Cooley, Agricultural Research Service, Boise, Idaho, was recognized for the best poster presentation. That poster paper was entitled "Assessing the Effects of Climate Changes on Snowpack and Streamflow." The El Farsante award was presented to James K. Marron, Secretary of the Western Snow Conference. Jim was recognized because, (1) tried to pass off the 1987 treasurers report for the 1988 report, (2) failed to procure for the new members the bolo ties which are so important to the membership, (3) for suggesting that the members who have received the El Farsante should now have to wear a special bolo tie to identify them, and (4) for somehow showing up at the meeting without the registration gift usually provided to the registered attendees. Of notable interest was the fact that George Clagett's nomination speech for Jim Marron only took twenty minutes instead of the expected 1 hour 45 minutes. Finally, Gary McMahan, Western Singer, Yodeller, and Poet delighted the audience with many of his own songs and poems. The presentation was very entertaining. To attest to the entertaining evening Gary had no cassette tapes left when he headed for the hotel bar. Would any real COWBOY leave without going to the bar.

ATTENDANCE ROSTER
WESTERN SNOW CONFERENCE
FORT COLLINS, COLORADO

<u>NAME</u>	<u>FIRST NAME</u>	<u>BUREAU OR AGENCY</u>	<u>CITY</u>	<u>STATE</u>
<u>North Continental Area</u>				
Ashley	Steve J.	C.S.K.T. Water Management	Pablo	MT
Baglio	Joe	Science & Applications Branch EROS	Sioux Falls	SD
Beard	Gerald	Soil Conservation Service	Boise	ID
Bird	Kenneth G.	RMF & RES USFS USDA	Laramie	WY
Cooley	Keith R.	USDA-Agricultural Research	Boise	ID
Farnes	Phillip	Soil Conservation Service	Bozeman	MT
Felchle	Tim	Bureau of Reclamation	Billings	MT
Hardy	Janet	Montana State University	Bozeman	MT
Jairell	Robert L.	US Forest Service	Laramie	WY
Johnson	Lawrence A.	SCS, Snow Survey	Casper	WY
Kite	G.	Hydrometeorological Research Div.	Saskatoon	SK
Kuhnke	Bill	RFC, Alberta Environment	Edmonton	AB
McLeod	George E.	C.S.K.T. Water Management	Pablo	MT
Molnau	Myron		Moscow	ID
Morrisey	Philip	Soil Conservation Service	Boise	ID
Palmer	Peter L.	USDA Soil Conservation Service	Boise	ID
Phelps	Nora	Bureau of Reclamation	Billings	MT
Snow	Phyllis Jeanne	Flathead NR, US Forest Serv.	Kalispell	MT
Steppuhn	Harold	Agriculture Canada Research	Swift Current	SA
Sturges	David	Rocky Mtn. Exp. Stn.	Laramie	WY
Swanson	Robert H.	Canadian Forestry Service	Edmonton	AB
Waddington	John	Agriculture Canada	Swift Current	SK
Winter	Charles J. (Jim)	USGS	Rapid City	SD
<u>North Pacific Area</u>				
Crook	Arthur G.	Arthur G. Crook and Associates	Beaverton	OR
deLisser	D.A.	ALCAN Smelters & Chemicals Ltd.	Kitimat	B.C.
Fox	Stan	Soil Conservation Service	Beaverton	OR
Garen	David	Soil Conservation Service	Portland	OR
Harr	R. Dennis	College of Forest Res. - AR-10	Seattle	WA
Hartman	Robert K.	Soil Conservation Service	Aloha	OR
Huffman	Don	Soil Conservation Service	Portland	OR
Johnson	David E.	USDA Soil Conservation Service	Portland	OR
Jones	Kenneth C.	Soil Conservation Service	Beaverton	OR
Leupold Jr.	Norbert		Beaverton	OR
Marron	James K.	USDA Soil Conservation Service	Beaverton	OR
Minter	Ben	Corps of Engineers	Portland	OR
Reed	Kenneth R.	Pacific Power & Light Co - Retired	Hillsboro	OR

<u>NAME</u>	<u>FIRST NAME</u>	<u>BUREAU OR AGENCY</u>	<u>CITY</u>	<u>STATE</u>
Richards	R.P.	BC Ministry of Environ	Victoria	BC
Sarantitis	Barbara C.	Soil Conservation Service	Portland	OR
Schaefer	D. Garry		Vancouver	BC
	Garry	Soil Conservation Service	Portland	OR
Speers	Douglas D.	Corps of Engineers, NPD	Portland	OR
Whaley	Jay	Seattle City Light	Seattle	WA
Wong	Kwan	Seattle City Light	Seattle	WA
Wortman	Randy	US Army Corp of Engineers	Portland	OR

South Continental Area

Abramovich	Ron	USDA SCS Snow Survey	Salt Lake City	UT
Adams	Ben	SCS Snow Surveys	Denver	CO
	Bob	US Bureau of Reclamation	Salt Lake City	UT
Allen	Milan	NOAA/NWS/NSSFC	Minneapolis	MN
Armstrong	Richard L.	U of Colorado CIRES	Boulder	CO
Baker	Dennis	Nor. Colo. Water Cons.	Loveland	CO
Beaver	Larry	U.S. Geological Survey,	Arvada	CO
		WRD		
Bedard Jr.	A.J.	NOAA/ERL/WPL	Boulder	CO
Carroll	Tom	National Weather Service	Minneapolis	MN
Crow	Loren W.	Loren W. Crow Consulting	Denver	CO
Day	Jay	WOH3 - National Weather	Silverspring	MD
		Service		
Doesken	Nolan J.	Dept. of Atmospheric Sc.	Ft. Collins	CO
Dosch	Theron R.		Littleton	CO
Everaert	Ed	Bureau of Reclamation	Loveland	CO
Fecke	William C.	Soil Conservation Service	Fairfax	VA
Frick, P.E.	David M.	Resource Consultants,	Fort Collins	CO
		Inc.		
George	Tommy A.	Soil Conservation Service	Centerville	VA
Gillespie	Mike	SCS Snow Survey	Wheat Ridge	CO
Gordon	Michael	US Bureau of Reclamation	Loveland	CO
Hamburg	Robert	State of Colorado	Denver	CO
Hart	George E.	Utah State University	Logan	UT
Hoham	Dr. Ron	Department of Biology	Hamilton	NY
Holroyd	E.W.	Bureau of Reclamation	Denver	CO
Kenny	Jerry	Boyle Engineering	Lakewood	CO
Kraus	Julie	Denver Water Department	Denver	CO
Leavesley	George H.	US Geological Survey WRD	Lakewood	CO
Martin	J. Kenneth	Soil Conservation Service	Albuquerque	NM
Martinez	Manuel H.	US Forest Service	Ft. Collins	CO
McDonnell	Dr. Jeff	Department of Natural	Logan	UT
		Resources		
Meiman	Jim	Colorado State University	Wellington	CO
Moreland	Ronald E.	Soil Conservation Service	Denver	CO
Oliver	Mark	Sear-Browh Group	Park City	UT
Rango	Al	USDA Agriculture Research	Beltsville	MD
		Ser.		
Stannard	Linda	US Geological Survey	Lakewood	CO
Stednick	Dr. John	Colorado State Univ.	Ft. Collins	CO
Steger	Robert	Denver Water Department	Denver	CO
Troendle	Charles	USDA Forest Service	Ft. Collins	CO
Van Haveren	Bruce P.	Bureau of Land Management	Lakewood	CO
Verdin	James P.	Bureau of Reclamation	Denver	CO
von Puttkamer	Oscar Andre's	HIDRONOR S.A.	Cipolletti, Rio Negro	
Wahl	Kenneth	USGS Denver Federal Cntr	Lakewood	CO
Washichek	Jack		Ft. Collins	CO
Werner	Jon	Soil Conservation Service	Salt Lake City	UT
Yates Jr.	Garner	National Weather Service	Minneapolis	MN

<u>NAME</u>	<u>FIRST NAME</u>	<u>BUREAU OR AGENCY</u>	<u>CITY</u>	<u>STATE</u>
<u>South Pacific Area</u>				
Berg	Neil	USDA Forest Service	Berkeley	CA
Bergman	James A.	USDA FS - CSSL	Truckee	CA
Brandow	Clay	Calif. Dept. of Water Res.	Davis	CA
Burke	Michael T.	Engineering Manager - SEMCOR	San Diego	CA
Ester	Charles	Salt River Project	Phoenix	AZ
Fong	William	DWR Retired	Sacramento	CA
Freeman	Gary J.	PGE-Hydro Generation, Rm F-773	San Francisco	CA
Gehrke	Frank		Sacramento	CA
Hannaford	Jack F.	Sierra Hydrotech	Placerville	CA
Hasencamp	Bill	LA Dept. of Water & Power	Los Angeles	CA
Henderson	Thomas J.	Atmospherics Incorporated	Fresno	CA
Jones	Ronald A.	Soil Conservation Service	Mesa	AZ
Kattelman	Richard	CRSEO/CSL, 1140 Girvetz	Santa Barbara	CA
Keane	John L.	Salt River Project	Phoenix	AZ
McGurk	Bruce J.	US Forest Service	Berkeley	CA
Pacheco	Chris	Soil Conservation Service	Reno	NV
Rincon	Mark A.	East Bay Municipal Utility Dist.	Oakland	CA
Roos	Maurice	California DWR	Sacramento	CA
Sliger	G. Neil	Southern California Edison	Rosemead	CA

THE CHAIRMEN OF THE WESTERN SNOW CONFERENCE
 compiled by James K. Marron
 Secretary - Western Snow Conference

The first meeting of the "Western Interstate Snow Survey Conference" was held in Reno Nevada on February 2, 1933 to organize the conference. George D. Clyde of the Utah Agricultural College presided. The meeting was opened by S. B. Doten, Director of the Nevada Agricultural Experiment Station. Dr. J. E. Church was in attendance and asked that the Director, Mr. Doten, open the meeting. It was decided that the Conference should meet annually the first meeting to be in June of that year.

From 1933 to 1946, approximately, the "Western Interstate Snow Survey Conference" held it's meeting concurrently with the American Geophysical Union. In many cases, the papers of the Western Snow Conference were actually published by the National Research Council of the National Academy of Sciences. In 1947 the annual meeting was set for April and has been held in April since that time. It is not clear at this time when the name was shortened to "Western Snow Conference".

<u>Meeting</u>	<u>Year</u>	<u>General Chairman</u>	<u>Meeting City</u>
1st	1933-June	George D. Clyde	Reno, Nevada
2	1934-June	Harlowe M. Stafford	Berkeley, California
3	1935-November	J. E. Jones	Salt Lake City, Utah
4	1936-January	J. E. Jones	Pasadena, California
5	1937-June	George D. Clyde	Denver, Colorado
6	1938-January	George D. Clyde	Davis, California
7	1938-December	Horace P. Boardman	Los Angeles, California
	1938-December	Horace P. Boardman	Spokane, Washington
-- No Official Meeting was held in 1939 --			
8	1940-January	Horace P. Boardman	Palo Alto, California
	1940-June	Horace P. Boardman	Seattle, Washington
9	1941-January	Fred Paget	Sacramento, California
10	1942-January	Fred Paget	Pasadena, California
11	1943-June	Fred Paget	Corvallis, Oregon
12	1944-February	Fred Paget	Berkeley, California
13	1945-April	R. A. Work	Portland, Oregon
14	1946-February	R. A. Work	Sacramento, California
15	1947	Wayne D. Criddle	Portland, Oregon
16	1948	"	Reno, Nevada
17	1949	Ralph L. Parshall	Denver, Colorado
18	1950	"	Boulder City, Nevada
19	1951	Homer J. Stockwell	Victoria, B.C.
20	1952	William A. Lang	Ft. Collins, Colo.
21	1953	"	Boise, Idaho
22	1954	Austin E. Helmers	Salt Lake City, Utah
23	1955	Walter E. Johnson	Portland, Oregon
24	1956	Ashton R. Codd	Penticton
25	1957	"	Santa Barbara, Cali.
26	1958	Francis T. Mayo	Bozeman, Montana
27	1959	"	Reno, Nevada
28	1960	"	Sante Fe, New Mexico
29	1961	Jerry Van de Erve	Spokane, Washington
30	1962	"	Cheyenne, Wyoming
31	1963	Wilbur D. Simons	Yosemite Nat. Park
32	1964	"	Nelson, B.C.
33	1965	Morlan Nelson	Colorado Springs, CO
34	1966	"	Seattle, Washington

<u>Meeting</u>	<u>Year</u>	<u>General Chairman</u>	<u>Meeting City</u>
35	1967	Robert W. Fischer	Boise, Idaho
36	1968	"	S. Shore Lake Tahoe
37	1969	Glenn H. Castle	Salt Lake City, Utah
38	1970	"	Victoria, B.C.
39	1971	Harry I. Hunter	Billings, Montana
40	1972	"	Phoenix, Arizona
41	1973	Phillip E. Farnes	Grand Junction, Colo
42	1974	"	Anchorage, Alaska
43	1975	Archie M. Kahan	Coronado, California
44	1976	"	Calgary, Alberta
45	1977	James L. Smith	Albuquerque, New Mex
46	1978	"	Otter Rock, Oregon
47	1979	Manes Barton	Sparks, Nevada
48	1980	"	Laramie, Wyoming
49	1981	Jack Wilson	St. George, Utah
50	1982	"	Reno, Nevada
51	1983	James Meiman	Vancouver, Wash.
52	1984	"	Sun Valley, Idaho
53	1985	Jack F. Hannaford	Boulder, Colorado
54	1986	"	Phoenix, Arizona
55	1987	Arthur G. Crook	Vancouver, B.C.
56	1988	"	Kalispell, Montana
57	1989	Robert H. Swanson	Ft. Collins, Colo.

Thomas Henderson, Atmospherics Incorporated, Fresno, California, was tremendous help in filling in most of the early years, and I want to thank him for his assistance.