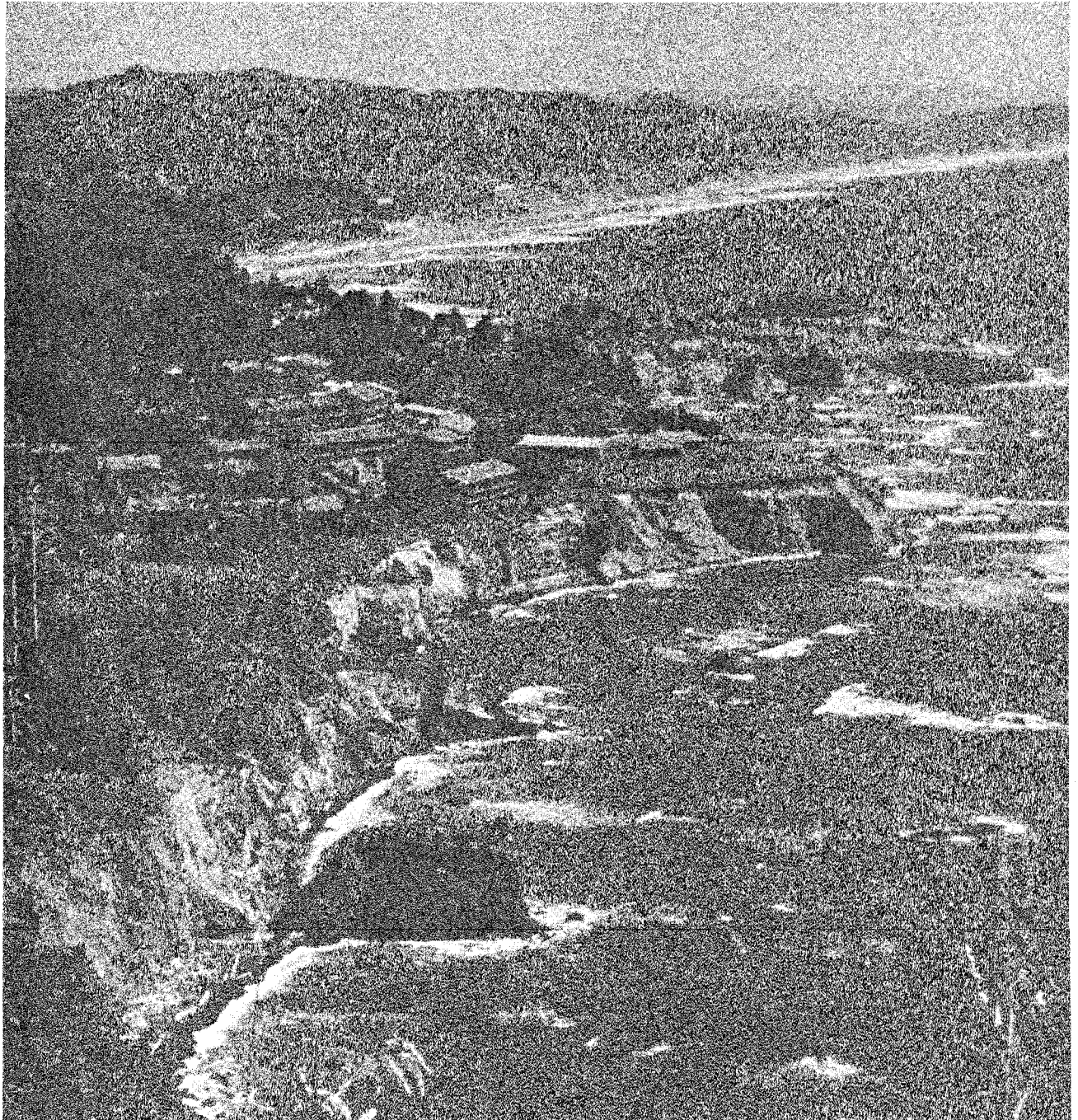


# 46th ANNUAL MEETING WESTERN SNOW CONFERENCE

APRIL 18-20, 1978

Inn at Otter Crest  
Oregon



PROCEEDINGS  
of the  
WESTERN SNOW CONFERENCE

Otter Rock, Oregon

April 18-20, 1978

FORTY SIXTH ANNUAL MEETING

Dr. James L. Smith (General Chairman)  
U.S. Forest Service  
Pacific Southwest Forest & Range Expt.  
Station, P. O. Box 245  
Berkeley, CA 94701

Robert T. Davis (Secretary)  
Soil Conservation Service  
Room 360 U. S. Courthouse  
Spokane, WA 99201

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Arthur G. Crook, Chairman  
C. H. Coulson  
F. A. Limpert  
K. R. Reed  
Vail Schermerhorn

Editorial Committee

Bernard A. Shafer, Editor  
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James R. Meiman

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PROCEEDINGS OF THE WESTERN SNOW CONFERENCE

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WESTERN SNOW CONFERENCE

BIBLIOGRAPHY AND PROCEEDINGS

The Bibliography of Western Snow Conference Proceedings is available from the Secretary at a cost of \$10.00 for non-members and \$7.00 for members. This Bibliography lists the papers and abstracts of all papers of the Western Snow Conference from 1933 through 1973. This Bibliography is sent in a three-ring binder or the abstracts can be cut apart and placed in a 3 x 5 card file.

Selected issues of past Proceedings are also available from the Secretary at a cost of \$7.50 each. Not all years are available and some are in short supply. The years and issues that are available on a first come, first served basis are:

1953	21st	1958	26th	1959	27th
1960	28th	1961	29th	1962	30th
1964	32nd	1965	33rd	1966	34th
1967	35th	1968	36th	1970	38th
1971	39th	1972	40th	1973	41st
1974	42nd	1975	43rd	1976	44th
1977	45th	1978	46th		

MINUTES OF THE EXECUTIVE COMMITTEE

WESTERN SNOW CONFERENCE  
Otter Rock, Oregon

The General Chairman called the 46th meeting of the Executive Committee to order at 11:30 A.M., April 19, 1978 at Otter Rock, Oregon. The General Chairman asked the Secretary to report on the minutes of the last meeting. The Secretary reported that the minutes of the Albuquerque meeting were published in the Proceedings of that meeting and moved that they be accepted as printed. B Lang seconded. Carried. The General Chairman asked the Secretary for the financial report. The Secretary reported that there was a loss of \$862.12 for the year. There being no questions regarding the financial statement as handed out to the members, and explained by the Secretary, the Secretary moved the acceptance of the report. W. Simons seconded. Carried. The General Chairman requested the Secretary to report on the election of the Executive Committee. The Secretary read the names of the new Executive Committee to the members for their information. (See list published in Proceedings).

The General Chairman asked for the number of proxy votes present.

The General Chairman asked H. Coulson to give the nominee for the office of General Chairman for the next two years. H. Coulson stated that the North Pacific Area had met and could not decide between two excellent nominees, M. Barton and D. Kuehl. It was decided that these names would be presented to the Executive Committee for final selection by ballot. The General Chairman appointed W. Simons, P. Farnes and A. Work as tellers. The vote was counted and M. Barton was named the General Chairman for the next two years starting at the conclusion of this meeting.

The General Chairman requested the report of the Publication Committee composed of J. Washichek, B. Shafer and J. Meiman. J. Meiman stated that J. Washichek would report on the Proceedings. J. Washichek handed out a proposed publications policy report (copy follows these minutes) and explained its impact and change from the current policy. Discussion followed by several members. It was moved by J. Meiman and seconded that the publication policy as presented be adopted. Carried. J. Meiman asked B. Shafer to present the publications committee report on the Forum. B. Shafer gave his report with the suggestion that Forum type material be included as a part of the Proceedings. This material will be screened by the publication committee as to what is suitable for publication. Discussion followed by many members. It was moved and seconded that the Forum be discontinued and that Forum type material be included in the Proceedings, as a subsection. This material to be passed on by the publication committee.

The General Chairman then introduced the new General Chairman, Manes Barton, to the group.

The General Chairman then thanked the publication committee for the excellent job they did with these proceedings reports.

The General Chairman requested that B. Brown give the report of the Awards Committee. B. Brown requested that each of the areas give him nominees for life membership. The following names were submitted. V. Schermerhorn, D. Rockwood and L. Peterson, and were voted Life Membership. B. Brown requested that each area chairman supply him with nominees for El Farsante.

P. Farnes moved that the Proceedings of this conference be dedicated to Ash Codd. The motion was seconded and carried.

The General Chairman asked H. Coulson for the report of the Metrification Committee. H. Coulson reported that the committee met last evening to consider two main items. 1) the cutter tests carried out this last winter, and 2) equipment design. The cutter tests done were not conclusive enough to warrant recommendations as to which is best. It is recommended that these tests continue. The equipment design falls into two categories, 1) conversion of existing sampling equipment, and 2) design and manufacturer of new pure metric equipment. The conversion of existing equipment is recommended in the interim until

an approved design is adopted. Conversion will mean using the same cutter and tube size and making the conversion mathematically, or if so desired, physically marking the existing tubes and scales in metric. The committee could not come up with a unanimous decision as to what a "pure metric snow sampler" should consist of. It was recommended that a workshop be held with a limited number of agencies deeply involved in snow sampling participating, to come up with a proposed design. The General Chairman then proposed that this workshop be called, at no cost to the conference. He proposed that the General Chairman write to the four agencies involved, 1) Atmospheric Environment Service, Downsview, Ontario; 2) Ministry of the Environment, Victoria, B. C.; 3) Department of Water Resources, Sacramento, California; 4) Soil Conservation Service, Bozeman, MT; requesting that these agencies send one man each, one that has been involved in the technical aspects of snow sampling, testing, to a technical workshop of one week duration. These individuals to develop a plan and criteria for unified development and testing of a metric sampler(s). The four representatives specifically requested will be Dr. B. Goodison, Mr. B. Letvak, Mr. N. Peterson and Mr. P. Farnes.

The General Chairman announced that W. Simons was appointed Chairman of the Historical Committee for the 50th anniversary meeting, and asked W. Simons for a report. W. Simons reported that he had started a historical notebook with meeting places, general chairmen, El Farsante, life members, honorary life members, etc., and stated he will be calling on other members for help.

The General Chairman announced that the Chairman of the Wilderness Committee, R. Leake has resigned, and he has appointed Dr. A. Kahan the new Chairman. Since neither of these men could be in attendance, the General Chairman asked J. Brown for a report of the Wilderness Committee. The committee met and discussed the legislation that has been passed and that which is still in the hopper. One bill that was passed had no specified relief for the placement of hydrometeorological devices, but another dealing with National Parks had language that permitted the installation of sensing devices. Administrative support has been offered by the California Sierra Club to assist the agencies in getting some devices installed. In conclusion, it appears that the only solution will be legislative, such as the Sisk Amendment. There has been a new position paper issued by the Assistant Secretary of Agriculture, Rupert Cutler, that appears to allow the continued existence of sensing devices within Wilderness without the ten year limitation. It does not address itself to the establishment of new sites. J. Brown suggested that the Wilderness Committee be reconstituted and suggested the names of B. Warskow, J. Whaley and L. Ambrose be considered as enthusiastic members. The General Chairman stated that he would not restructure the committee, but that he would leave it up to the new General Chairman.

The General Chairman then asked R. Moreland to report on the 1979 meeting, the Archives report and the Church report. R. Moreland reported that the 1979 meeting is set for the Nugget in Sparks, the rooms are still about \$22 single and 100 rooms are reserved. He will try to get that up to one hundred thirty five. Additional rooms will be available at motels close by. The dates are April 18, 19, & 20. He then read a letter from the Governor inviting the conference to Nevada. He announced the recipient of the Church award, John J. Warren and told of his qualifications. He showed the plaque that hangs in the Reno High School with the names of the recipients. The General Chairman then asked for a motion authorizing R. Moreland to refurbish the plaque. It was moved by N. Deets that R. Moreland come to the next meeting with two alternatives 1) the cost of refurbishing the existing plaque and 2) the cost of a new plaque with additional spaces. The motion was seconded by J. Wilson. Carried.

The General Chairman then asked A. Rango for a report on his proposal. A. Rango stated that he was planning to hold his workshop the preceding two days before the 1979 meeting, also at the Nuggett. There would be no conflict, as each would be run separately, but notices would be included in each mail out of the others activity.

The General Chairman then asked B. Goodison for his comments from the Eastern Snow Conference. B. Goodison reported the Eastern Snow Conference was moving away from their traditional February date and further, they were proposing that there be a joint meeting of the Eastern and Western Snow Conference. They proposed that the Eastern Snow Conference come west for the 50th anniversary meeting to be held in 1982. It would not be a true joint

meeting, but more a visitation by the Eastern Snow Conference to the Western Snow Conference. The General Chairman asked the committee for any comments. There were several, all favorable. There was a question about the fiftieth anniversary meeting, so the General Chairman reviewed the last years discussion on the anniversary meeting. It was moved by R. Moreland that we accept their invitation to get together at our 50th anniversary celebration as guests, but not as participants. The motion was seconded and carried.

The General Chairman then opened the floor for any new business. P. Farnes stated that he had a collection of letters from A. Codd written in his own style, that he would be willing to donate to the conference archives. It was decided that P. Farnes would send the material to the Secretary, he would review it and prepare it for the archives, possibly in a ring binder.

J. Brown suggested the possibility of a snow survey shoulder patch, sponsored by the Snow Conference, could be designed that would represent all snow surveyors, both East and West. It was discussed by some members and the General Chairman commented that the Forest Service and Soil Conservation Service already have shoulder patches. The final consensus was that there were enough agency patches, that an additional patch would be inappropriate.

It was brought out by B. Brown that there should be some relief of the registration fee for life members. A review of the procedure was discussed by the General Chairman. There was some discussion that the retired life members be assessed a registration fee of 50% of the normal fee. There was some discussion as to making it a fixed amount such as 5 or 10 dollars. It was moved that a fixed fee of \$5.00 be assessed as a registration fee to retired life and honorary members of the Western Snow Conference. The motion was seconded and carried.

It was moved that a constitutional amendment be recommended to the general business meeting to remove the limitation of 10% life membership. This is Article III, Membership Section (4) last paragraph. The motion was seconded and carried. Constitutional amendments must be passed by the general business meeting and so this will be brought up as the general business meeting.

There was some discussion as to how to make the election of the executive board more equitable in areal coverage as well as agency coverage. There being no suggestions as to how to improve the election and nomination process, it was recommended that the area chairman follow more closely the constitution and by-laws in selecting candidates.

There was a request for a report on the 1980 meeting. The secretary reported that the rotation through the areas and in the states in that area, would indicate that the 1980 meeting would be held in Wyoming. The General Chairman requested that the North Continental Area caucus and bring a report to the general business meeting.

The General Chairman thanked the North Pacific Area for the excellent planning that went into this meeting, and to the Davises for their help to him.

There being no further business, the General Chairman declared the meeting adjourned.

Respectfully submitted.

Robert T. Davis, Secretary



# MINUTES OF THE BUSINESS MEETING

## WESTERN SNOW CONFERENCE Otter Rock, Oregon

The meeting was called to order by the General Chairman on April 20, 1978. The General Chairman asked the Secretary to read the minutes. The Secretary reported that the minutes of the Albuquerque meeting were published in the Proceedings and moved that the minutes be approved as printed. W. Simons seconded, Motion carried. The General Chairman then asked the Secretary for the financial report. The Secretary reported the cost of the Albuquerque meeting was \$5054.20, the income \$5193.00. Income during the year was \$3350.95 and expenses \$4351.87, for a loss of \$862.12. The Secretary moved the acceptance of the financial report as audited by R. Benker and D. Felgenhauer. F. Limpert seconded. Carried.

The General Chairman reported that the Executive Committee was bringing before the membership a minor constitutional amendment and asked W. Simons for the report. (See minutes of Executive Committee) W. Simons moved the constitutional amendment be adopted. B. Lang seconded. Carried.

The General Chairman then asked for a report of the Publication Committee. J. Washichek read the proposed publication policy and reported on the proposed substitute for the Forum which will be published with the Proceedings. (See policies published in this Proceedings)

The General Chairman reported that R. Leake has resigned as Chairman of the Wilderness Committee and A. Kahan has agreed to serve as the new chairman. Since A. Kahan was unable to be at this meeting, J. Brown was asked to serve as temporary chairman and give the report of the committee (See minutes of Executive Committee). L. Ambrose reported that he was going to attend the Western Systems Operators Conference in Boise, in June and would be pleased to represent the Western Snow Conference at that meeting, if so authorized. The General Chairman accepted his offer and stated that any material or letter needed would be supplied by the Secretary. It was moved by F. Limpert that L. Ambrose be so authorized, seconded by J. Brown. Carried.

The General Chairman reported that there have been questions regarding the nomination and election process of the Executive Committee members. (See minutes of Executive Committee).

The General Chairman asked W. Simons for a report of the historical committee (See minutes of Executive Committee).

The General Chairman thanked the North Pacific Area Committee for putting on a well organized meeting.

The General Chairman asked B. Goodison to come forward and present a proposal from the Eastern Snow Conference. (See minutes of Executive Committee). The General Chairman reported that the Executive Committee approved the proposal from the Eastern Snow Conference inviting them to join us in 1982, and the future program and executive committees will be working on the logistics of this proposal.

The General Chairman responded to a question from a member that the whole theme of the anniversary meeting has not been set. It might or might not be a pure technical session, but it will be a program of the Executive Committee and not of the local area; and it might or might not be limited to 16 papers, or even the two and a half days of the regular meeting. All this will be decided by the Executive Committee that will be putting on the anniversary meeting.

The General Chairman asked A. Rango to report on the progress of his meeting which will be held at the Nugget in Sparks, the two days preceding the Western Snow Conference meeting. This should give a greater opportunity for participants of both meetings to enjoy the others presentations. Notices of both meetings will be sent by both organizations.



The General Chairman reported the Executive Committee has passed a motion setting the registration fee for retired Life and Honorary Life Members (See minutes of Executive Committee).

The General Chairman asked H. Coulson for the report of the Metrification Committee. (See minutes of Executive Committee). The General Chairman reported that the Western Snow Conference was proposing a metrification workshop (See minutes of Executive Committee).

The General Chairman asked F. Limpert for the resolutions report. F. Limpert stated that it was decided last year that no formal resolutions would be sent, but they would be included in the minutes of the business meeting of the Western Snow Conference. It was recommended that special thanks be extended to the following people for the success of this meeting. 1) Mrs. Mo Niemi, 2) the staff of the Inn at Otter Crest, 3) V. Schermerhorn, and his local arrangements committee, D. Kuehl, C. Fetty and K. Reed, 4) Session Chairman and speakers, 5) R. Jones and K. Baust for visual aid assistance, 6) A. Work for his excellent presentation at the banquet, 7) James E. Sexson, luncheon speaker, 8) D. Speers and M. Barton, Master of Ceremonies, 9) Exhibitors for the displays, 10) J. Washichek for editing and publishing the Proceedings, 11) B. and J. Davis, 12) Gwen Crook and Leona Barton for the ladies arrangements, and 13) J. Smith as General Chairman. B. Lang suggested that a letter be sent to Mrs. Codd stating that this meeting was being dedicated to the memory of Ash Codd. It was moved, seconded, and passed that the resolutions be accepted.

The General Chairman then thanked the exhibitors for bringing their equipment for display for the membership. He also thanked the individuals and companies for their hospitality suites.

There being no further business, the General Chairman then turned the gavel over to the new General Chairman, Manes Barton.

M. Barton thanked J. Smith for the excellent job he has done during this term as General Chairman, and asked the membership to show their appreciation by a round of applause. A standing ovation was awarded to J. Smith.

M. Barton then adjourned the 46th annual meeting of the Western Snow Conference.

Respectfully submitted,

Robert T. Davis, Secretary

Awards presented at the Annual Banquet, Wednesday, April 19, 1978

Honorary Life Membership: Jack Washichek

Life Membership: Vail Schermerhorn  
Dave Rockwood  
Lee Peterson

El Farsante: Vail Schermerhorn

ATTENDANCE ROSTER  
WESTERN SNOW CONFERENCE  
INN AT OTTER CREST  
APRIL 18 - 20, 1978

Alexander, Clyde W.	Portland, Oregon ✓
Ambrose, L. K.	Seattle, Washington ✓
Anderson, James	Portland, Oregon ✓
Anderson, Mr. & Mrs. Henry	Lafayette, California
Andre, Joseph R.	Berkeley, California
Arndt, Clarence	N. Highlands, California
Atkins, Roy R.	Aledo, Texas
Avery, Charles	Flagstaff, Arizona
Barcellos, Mr. & Mrs. Daniel	Sacramento, California
Barnes, James	Concord, Massachusetts
Barton, Mr. & Mrs. Manes	Gresham, Oregon ✓
Baum, Mr. & Mrs. Robert	Salem, Oregon ✓
Beach, Mr. & Mrs. Chauncey	Seattle, Washington ✓
Beard, Mr. & Mrs. Gerald	Boise, Idaho
Berg, Neil	Berkeley, California
Berling, Mr. & Mrs. Bob	Loveland, Colorado
Bishop, Mr. & Mrs. Gary	Denver, Colorado
Bowers, Mr. & Mrs. Thomas	Anchorage, Alaska
Boyne, H. S.	Boulder, Colorado
Brooks, Kenneth	St. Paul, Minnesota
Brown, A. J.	Sacramento, California
Brown, R. T.	Rosemead, California
Brush, Mr. & Mrs. Harold	Boise, Idaho ✓
Brust, Mr. & Mrs. Kenneth	Portland, Oregon ✓
Burke, Mike	Emeryville, California
Burnash, Robert	El Dorado Hills, California
Carpenter, Mr. & Mrs. Dib	Oakland, California
Castruccio, Peter A.	Gambrills, Maryland
Christner, Jere	Eugene, Oregon ✓
Clagett, George	Anchorage, Alaska
Clapp, Mr. & Mrs. Fred	Berkeley, California
Clark, John	Boulder, Colorado
Clorety, Mr. & Mrs. Barney	Sacramento, California
Copenhagen, Mr. & Mrs. Max	Wenatchee, Washington ✓
Coulson, Hal	Victoria, British Columbia ✓
Cox, Lloyd M.	Boise, Idaho
Crook, Mr. & Mrs. Arthur	Beaverton, Oregon ✓
Dahl, Mr. & Mrs. Bob	Oakdale, California
Danielson, Jeris	Lakewood, Colorado
Davis, Mr. & Mrs. Robert	Spokane, Washington ✓
Deets, Mr. & Mrs. Neil	Vernal, Utah
Dillard, John	Portland, Oregon ✓
Doyle, Mr. & Mrs. Jack	Tacoma, Washington ✓
Farnes, Phillip	Bozeman, Montana
Felgenhauer, Mr. & Mrs. Don	Spokane, Washington ✓
Fetty, Mr. & Mrs. Carl	Beaverton, Oregon ✓
Foehner, Olin	Denver, Colorado
Fogg, Jim	Waldport, Oregon
Foster, Jim	Silver Spring, Maryland
Frew, James	Santa Barbara, California
Fujicka, Francis	Berkeley, California
Gehrke, Frank	Irvine, California
George, Mr. & Mrs. Tom	Portland, Oregon ✓
Glassey, Gene	San Diego, California
Golding, Douglas	Edmonton, Alberta
Goodison, Barry	Downsview, Ontario
Gordon, Mr. & Mrs. Bill	Vancouver, Washington ✓
Gordon, John	Vancouver, British Columbia ✓

Coss, Clark, Jr.  
 Graham, Mr. & Mrs. David  
 Green, Mr. & Mrs. Gordon  
 Greer, Mr. & Mrs. Albert  
 Griffith, Don  
 Gulick, Ivan  
 Haglund, Mr. & Mrs. Jim  
 Hall, Dorothy  
 Hall, Rod  
 Hannaford, Jack  
 Hanson, Jeffrey  
 Harder, Mr. & Mrs. Orrin  
 Hearn, Mr. & Mrs. Roger  
 Hildebrand, Mr. & Mrs. Carver  
 Holmes, Mr. & Mrs. George  
 Horton, Mr. & Mrs. C. H.  
 Huffman, Donald  
 Hughes, Callas  
 Hunter, Mr. & Mrs. Harry  
 Janz, Ben  
 Johnson, Daniel  
 Johnson, Jim  
 Johnston, J. Ronald  
 Jones, Mr. & Mrs. Kenneth  
 Jones, Raymond  
 Jones, Ron  
 Jordan, Darrell  
 Kapustka, Mr. & Mrs. Stan  
 Kerr, Mr. & Mrs. W. Elliot  
 Klieforth, Harold  
 Kohler, Mr. & Mrs. Max  
 Kuehl, Mr. & Mrs. Don  
 Lang, Mr. & Mrs. William  
 Letvak, Bruce  
 Leupold, Mr. & Mrs. Norbert  
 Leupold, Mr. & Mrs. Norbert, Jr.  
 Limpert, Mr. & Mrs. Fritz  
 Loijens, Harry  
 Lute, Dan  
 Lyons, Steven  
 McCall, Mr. & Mrs. Warren  
 McKay, Dave  
 Marks, Danny  
 Marron, James  
 Meiman, Jim  
 Mitchell, Bruce  
 Moreland, Mr. & Mrs. Ron  
 Morrison, Robert  
 Morrison, Rod  
 Mukri, Louis  
 Orem, Mr. & Mrs. Hollis  
 Orwig, Chuck  
 Pabst, Don  
 Pattersen, P. E.  
 Peterson, Mr. & Mrs. Lee  
 Pfankuch, Mr. & Mrs. Dale  
 Power, John  
 Raetz, Roland  
 Rallison, Mr. & Mrs. Robert  
 Rango, Albert  
 Redfield, Robert  
 Reed, Mr. & Mrs. Kenneth  
 Reese, David

Portland, Oregon  
 Edmonton, Alberta  
 Beaverton, Oregon  
 Fort Worth, Texas  
 Santa Barbara, California  
 Sunnyvale, California  
 Casper, Wyoming  
 Greenbelt, Maryland  
 Placerville, California  
 Placerville, California  
 Portland, Oregon  
 Oakland, California  
 Portland, Oregon  
 Los Angeles, California  
 Gladstone, Oregon  
 Fresno, California  
 Bozeman, Montana  
 Portland, Oregon  
 Victoria, British Columbia  
 Edmonton, Alberta  
 Portland, Oregon  
 Galt, California  
 Lakewood, Colorado  
 Salt Lake City, Utah  
 Boulder, Colorado  
 Portland, Oregon  
 Phoenix, Arizona  
 Portland, Oregon  
 Edmonton, Alberta  
 Reno, Nevada  
 Silver Spring, Maryland  
 Portland, Oregon  
 Laguna Hills, California  
 Victoria, British Columbia  
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 Beaverton, Oregon  
 Beaverton, Oregon  
 Ottawa, Ontario  
 Boise, Idaho  
 Montrose, Colorado  
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Warskow, William  
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Welborn, Mr. & Mrs. Norman  
Werner, Jon  
Whaley, Mr. & Mrs. Bob  
Whaley, Jay  
White, Mr. & Mrs. Ron  
Wiesnet, Donald  
Wilson, Mr. & Mrs. Jack  
Woldenberg, Jay  
Work, Mr. & Mrs. R. A.  
Young, Loren  
Zoerb, Paul  
Zollinger, Mr. & Mrs. H. L.  
Zuzel, John

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Portland, Oregon ✓  
Moscow, Idaho  
Vancouver, British Columbia ✓  
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