

# "WRD RETIREES"

NEWSLETTER NO. 62

FEBRUARY 1989

*An organization of retirees of the Water Resources Division, U.S. Geological Survey, whose purpose is to keep its members in touch with each other and their former agency.*

National Officers: Robert M. Beall, President; Russell H. Langford, Vice President;  
Ruth L. Malone, Secretary; Sumner G. Heidel, Treasurer

Regional Officers: Alfred Clebsch, Jr., Central; David McCartney, Northeast;  
Donald G. Jordan, Southeast; Loren E. Young, Western

Newsletter Staff: Porter E. Ward, Editor; William J. Schneider, Assoc. Editor;  
Francis T. Schaefer, Asst. Editor; George E. Ferguson, Editor Emeritus

1990 Reunion Coordinator: Richard C. Heath

Address: "WRD Retirees", c/o USGS, 425A National Center, Reston, VA 22092

Phone: (703)648-5641

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## PRESIDENT'S MESSAGE

By the time you receive this, 1989 will be well underway. Still, it is not too late to wish you all good health and satisfaction in the coming year. In spite of life's uncertainties, there are many reasons to be thankful, not the least of which are the links we have with all of you through this newsletter and at our reunions and local gatherings in many places.

The uncertainties probably include your 1988 tax return, the prospects of adjusting to the operations of a new national administration, to Medicare revisions and, for some, the machinations of the local political system.

One thing that does remain constant, however, is our commitment to you to keep in touch (with your help) through the medium of this newsletter in its 16th year.

## WE NEED YOUR HELP

In order to better determine whether the WRD Retirees Newsletter is meeting your expectations, we need your assistance. Though we are not especially fond of questionnaires, we thought one might be useful in gathering your thoughts and views on how the Newsletter can be improved.

From time to time, a number of readers have expressed their interest (or non-interest) in various parts of the Newsletter, but we have not gained a broad-scope view. Most have expressed good feelings concerning the section on "News of Retirees." Incidentally, the percentage of members that have submitted material for inclusion in each of the last several issues of the Newsletter has been under five percent.

We would really like to hear from you, so please take a few minutes and send in the attached form (page 2), or if you are adverse to forms (including 1040's) drop us a line expressing your thoughts and recommendations. We will give serious consideration to all replies and will publish results in a subsequent Newsletter (without names, of course).

If you care to, enclose a few lines as to your activities, interests, and well-being. More of your former associates than you realize are interested in you and your retirement years. This, of course, includes surviving spouses.

Porter Ward

## QUESTIONNAIRE

To: Editor, "WRD Retirees," c/o USGS, 425A National Center, Reston, VA 22092

My level of interest in various sections and features of the Newsletter is as follows:

	High	Moderate	Low
Key Personnel Changes	_____	_____	_____
Recent Retirements	_____	_____	_____
WRD News (Program Information, Headquarters activities, etc., eg., NL 59; p. 2)	_____	_____	_____
Bureau News (Director's activities, News of other Divisions, etc., eg., "Director Peck Addresses GS Retirees," NL 61; p 7)	_____	_____	_____
New Publications			
Special articles from retirees (eg., "Down the Colorado with Keith Jackson," NL 61, p. 6)	_____	_____	_____
Special articles from actives (eg., "News from the National Research Program," NL 59, p. 3)	_____	_____	_____
News of Retirees	_____	_____	_____
In Memoriam	_____	_____	_____
Memoirs	_____	_____	_____
Local Retiree Gatherings	_____	_____	_____
Special Acknowledgements	_____	_____	_____
Treasurer's Report	_____	_____	_____
Directory Supplement	_____	_____	_____
Suggestions and comments for additional features/sections, etc.:			

I am a member (retiree) \_\_\_\_\_; an affiliate member (not yet retired) \_\_\_\_\_;  
a surviving spouse \_\_\_\_\_.

By (optional) \_\_\_\_\_



## 1990 FOUNDERS DAY REUNION

Many of you left Bellevue last September with the impression and expectation that we would be gathering somewhere in New England in 1990. Winds of change, however, redirected these early thoughts and plans and we are now destined to head southeast instead. The determining factor was the opportunity to take advantage of arrangements that are being made to hold a WRD National Conference in Orlando, Florida, November 11-15, 1990. Our reunion will be separate from, but contiguous to, that meeting and it will provide a unique occasion for meeting with many of the active leaders of WRD programs, some of whom you have indoctrinated with water arts and crafts.

We are delighted that Dick Heath has agreed to be the principal local organizer for the gathering. Don Jordan will be the go-between for coordination with the Southeastern Region, hosts of the National Conference. Hal Langford will do likewise here at the National Center.

A subsequent newsletter will include a questionnaire to assist Dick and others in planning the activities in Central Florida. Keep us informed of address changes so that you won't miss any of the forthcoming notices.

## USGS FOUNDATION PROPOSED

Those of you who attended the Biennial Reunion in the Seattle area will remember a presentation by Joe Cragwall regarding the possibility of establishing an independent foundation supported by USGS Retirees. The three retirees' organizations are now considering this possibility and have drafted some thoughts on the subject for consideration. The following has been excerpted from a preliminary draft proposal prepared by Joe Cragwall and is presented here for your information.

A non-profit foundation would be formed to establish a sustained fund through voluntary, tax-deductible (?) contributions, the income from which would be for the furtherance of worthy objectives relevant to the mission and responsibilities of the USGS. Uses of the fund will depend upon the size and growth rate of the fund. Some possible examples, depending upon available funds, might include the acquisition of historical items appropriate to the ownership and retention by the Survey; provision of travel and subsistence expenses for deserving earth science students, under-graduate or post-graduate, to attend Survey-sponsored conferences and symposia dealing with earth sciences research and management or to major international meetings of similar theme; funding of summer employment for deserving science and engineering students at Survey field centers of field projects; and loans or scholarships to college students pursuing education in subject areas relevant to Survey needs for personnel.

We will keep you informed through your newsletter of progress in this effort, and at an appropriate time, when more specific information is available, we will canvas the membership regarding interest. In the meantime, those wishing to comment now may send them directly to Joe Cragwall, 4901 English Drive, Annandale, VA 22003.

### FOUND

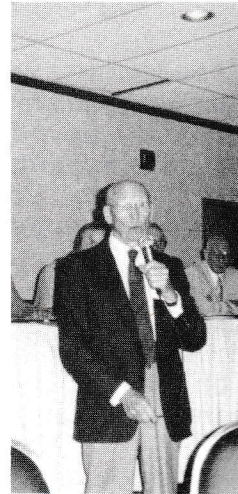
A man's dark blue cardigan (Christian Dior, size M) was left at the Bellevue, WA Retiree's Convention. If it is yours, contact Chuck Collier.



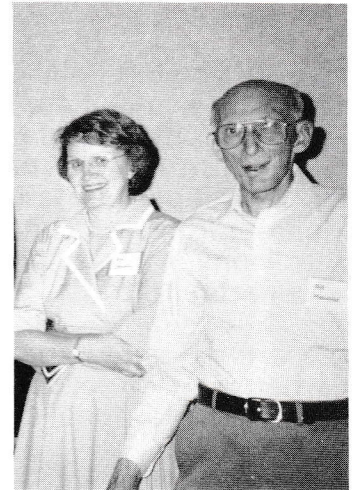
# SEATTLE REUNION



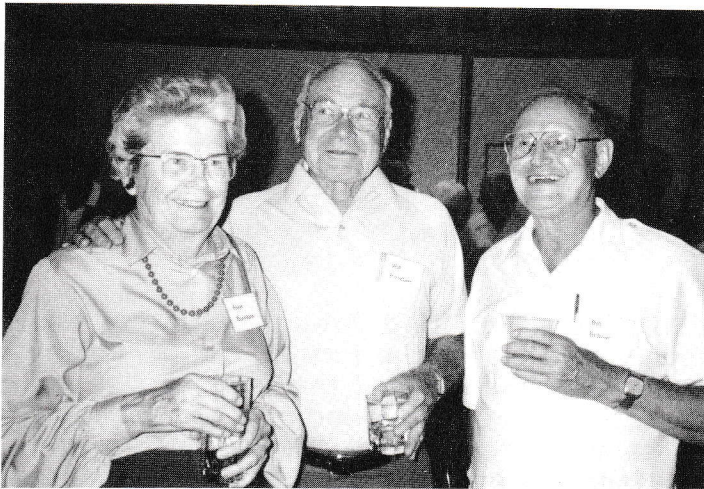
Rest Stop



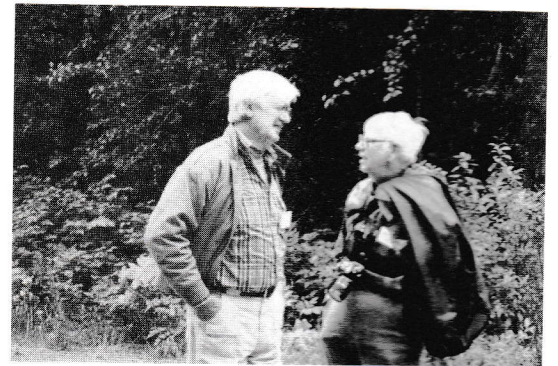
George Ferguson



Ann and Bill Haushild



Rose and Will Burnham, Bill Schneider



Lee Holt, Larry Newcomb



Bill and Evelyn Smith



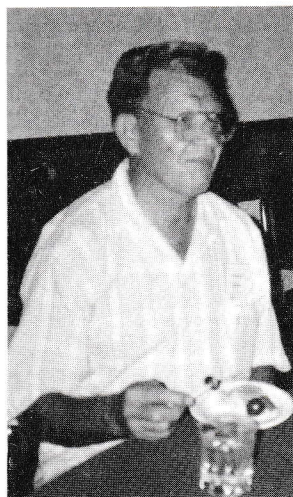
Chow Hounds



John and Marcella Wark



## SEPTEMBER 13-16, 1988



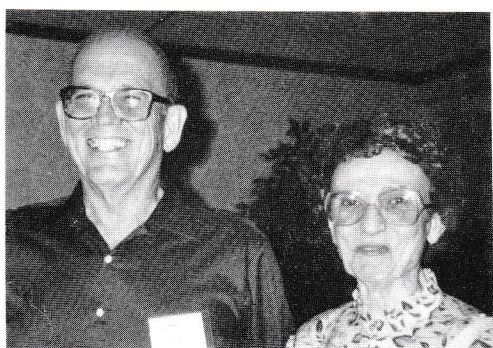
Swede Miller



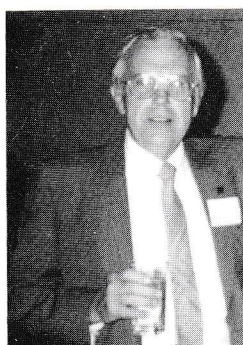
Vancouver Is., B.C.



Hal Langford



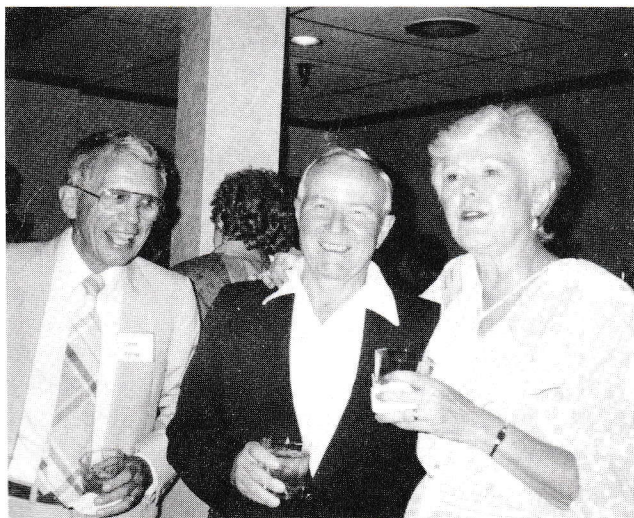
Jim and Margaret Rogers



Tom Buchanan



Jim and Mary Ellen Irwin



Loren Young, Ed Harris, Renee Young



Soup Line



## RECENT RETIREMENTS

National Headquarters: George A. Dinwiddie, Supervisory Hydrologist, on December 2, 1988.

Northeastern Region: William B. Gannon, Supervisory Hydrologist, Albany, NY, on December 2, 1988. \* \* \* \* Jerald F. McCain, Hydrologist, Reston, VA, on December 31, 1988.

Southeastern Region: Robert F. Carter, Supervisory Hydrologist, Doraville, GA, on December 3, 1988 \* \* \* \* Vester J. May, Supervisory Hydrologist, Nashville, TN, on December 29, 1988 \* \* \* \* Thelma H. Jackson, Administrative Clerk, Nashville, TN, on December 31, 1988 \* \* \* \* Franklin D. King, Hydrologic Technician, Williamsburg, KY, on December 31, 1988 \* \* \* \* Billy L. Raney, Hydrologic Technician, Louisville, KY, on December 31, 1988 \* \* \* \* Ruby S. Ingram, Administrative Clerk, Memphis, TN, on December 31, 1988.

Central Region: Pat L. Soule, Hydrologist, Albuquerque, NM, on January 3, 1989 \* \* \* \* Elizabeth A. Geiser, Regional Program Analyst, Lakewood, CO, on December 31, 1988 \* \* \* \* Victor J. Janzer, Hydrologist, Golden, CO, on December 30, 1988 \* \* \* \* Dorothy J. Pinckney, Physical Science Technician, Arvada, CO, on January 3, 1989 \* \* \* \* Leo F. Emmett, Hydrologist, Rolla, MO, on December 31, 1988 \* \* \* \* Roger A. Pewe, Hydrologic Technician, Bismarck, ND, on December 3, 1988 \* \* \* \* Herbert J. Bandelman, Hydrologic Technician, Huron, SD, on December 31, 1988 \* \* \* \* Neil C. Koch, Supervisory Hydrologist, Huron, SD, on December 31, 1988.

Western Region: Benjamin L. Jones, Supervisory Hydrologist, Menlo Park, CA, on December 31, 1988 \* \* \* \* Martha E. Zaccor, Secretary, Menlo Park, CA, on December 31, 1988 \* \* \* \* William A. Hart, Hydrologist, Portland, OR, on December 31, 1988 \* \* \* \* Richard M. Edmund, Hydrologic Technician, Medford, OR, on December 31, 1988

## FINANCIAL REPORT

Revised figures from the treasurer show that we started the 1988 calendar year with \$5,136, and during the year our income from dues, contributions, and bank account interest amounted to \$3,464. The cost of printing the four newsletters and the May 1988 Directory was \$3,400. Payment to the U.S. Postal Service for Bulk Mail totalled \$520. The remaining \$814 for miscellaneous items included purchase of stamps, (for first-class mail), purchase of a typewriter for secretarial work, and \$200 which was advanced for reunion start-up expense in Washington and the next reunion in Florida. The reunion expenses are expected to be fully underwritten by their operation. In 1987, the National office received \$92 from the 1986 Reunion, and some other members suggested their "contribution" go for the reunion expense. Our year-end bank balance stands at \$3,866.

## ACKNOWLEDGEMENTS

Treasurer Sumner Heidel reports since our acknowledgement in N.L. 61 and through December 31, 1988, 68 members have made contributions as large as \$24 in excess of dues. Our thanks to the following who made extra contributions of \$5 or more each: Kay Harris, Milt Hackett, Edward Harvey, Horace Babcock, Charles Lane, Charles Robinove, William Barnwell, George DeBuchananne, Marvin Slaughter, Margaret Woods, Maurice Mundorff, Jim Crooks, Theron Dosch, Harold Guy, Malcolm Hale, Bill Hardt, Don Milliken, Matthew Rorabaugh, Charles Sloan, Carleton Sumison, Loren Young, Jim Biesecker, William Gannon, Dot Niles, Robert E. Smith, Wayne Webb, Stan Lohman, and Julian Rostvedt. The total contributions amounted to \$369 and are especially appreciated as our expenses outran our income by a considerable amount in 1988.



## NEWS OF RETIREES

Jim and Vivian Bailey report that the scenery they experienced during their trans-Canadian rail trip following the Seattle reunion was magnificent.

Norm and Evelyn Beamer took a delightful trip through parts of British Columbia following the Seattle reunion. They had hoped to travel with Porter and Pat Ward, but their tour was full so separate travel was necessary.

Despite an earlier and painful fracture, Sarah Jane (Mrs. Paul C.) Benedict is happy to be able to walk and also to care for her apartment with the help of friends.

Larry Bidwell reports he is recovering from a heart attack followed by angioplasty and bypass surgery. He also advises that wife Helen died on Thanksgiving Day after suffering a massive stroke. Our sympathy to you, Larry.

Harry Blanchard reports that he will be installed in December as president of both local NARFE and AARP chapters for the 1989 year.

Henry and Marilyn Broom left Tacoma in September for a trip across northern United States and southern Canada, down the East coast to Florida. They left their motor home in Florida and flew back to Tacoma for Thanksgiving and Christmas. Flew back to Florida in January, picked up the motor home, and drove to Arizona where they are snowbirding until May when they return to Tacoma.

From Dean and Ruth Bogart comes the good news that Ruth is recovering steadily from a right hip replacement last November and once again is relatively mobile. She hopes to be back in their swimming pool again at an early date.

George and Del Cardwell toured to their home state, Missouri, last November and managed to include the Blue Ridge mountains and the coasts of Georgia and South Carolina.

Thanks to D. J. Cederstrom (Ceedy) for his ophthalmologist recommendation. The good doctor unfortunately, is no longer with us. Ceedy notes that wife Kay had retina surgery on both eyes.

George Condrey and Bette report an eventful year including their 50th wedding anniversary and many family gatherings and changes. In July, it was discovered that Bette had a malignancy. She is undergoing radiation and chemotherapy and is doing well. We send our best wishes for a full recovery.

Dale Cotter reports that talking to people at Seattle encouraged him to check up on other Wisconsin retirees. On October 26, Eddie Bell, Roy Campbell, Bob Devaul, Fred Dreher, Bill Drescher, and Jack Green took time from their busy schedules to have coffee and donuts at the Cotters, where they all caught up on each other's activities.

Frank and Grayson Clarke have been on the road again, this time touring China for three weeks. When you visit the Clarkes, ask to see their video tape of that trip.

Dave Dawdy reports considerable activity in various aspects of water resources investigations from Glen Canyon reservoir to Kesterson to San Francisco Bay -- more details in a later NL.

Bob Fish has been serving on the Planning Commission and as Zoning Officer for Pike County, reportedly the fastest growing county in Pennsylvania. He says there's hardly any time left for golf.

Ellis Gordon notes that he and Dorothy are back in their winter home in McAllen, Texas. Dorothy had both knee joints replaced in November and is walking as much as a tenth of a mile at a time. Last summer they spent two months in their motor home in the Colorado and Wyoming mountains.

Harold Guy completed his work on sediment in Saudia Arabia last June. The Guys travel in their motor home about four months each year.

Bill and Ann Haushild were successful in their salmon fishing in Alaska. Bill landed a 36-pounder, but then Ann followed with a 52 + pound salmon. They attended Bill's 50-year reunion of his high school class in Rapid City followed by the retiree gathering in Bellevue that Bill had helped organize. Ann's parents have moved from Stevens Point, Wisconsin, to a retirement center in Tacoma.



Hap Hayes reports that Fran has been fighting eye problems since January 1988. Hang in there, Fran! Bill and Margaret Schaefer have had more than their share of the same during 1988. Hap says they see the Isherwoods frequently and Glenn Prescott occasionally.

Health problems prevented Allen and Mickey Healy from attending the Seattle reunion so they were happy to see photographs in NL 61. They said without them they might not recognize some of their former colleagues.

Dick Heath reports that Marion County, Florida, has entered into an agreement with the USGS and the St. Johns River Water Management District to study the hydrogeology of the Silver Springs basin. Silver Springs near Ocala is the largest non-coastal spring in Florida -- discharge 820 cfs.

Dick Hoggatt continues to bid on the contract for hydrologic analyses and manuscripts for about 100 streamflow stations for the Indiana District.

Jim and Mary Ellen Irwin report a great time at the Seattle reunion.

Bill and Pat Isherwood enjoyed a trip early in 1988 to the high Andes and steamy jungles of Venezuela. Despite a fall out of a native dug-out canoe with all cameras around his neck, Bill was unharmed and the cameras are again operable. With Bill as concert master, the Augusta (Maine) Symphony has recently had its Christmas Concert - with standing room only in the town's largest auditorium.

Barbara (Mrs. John) Horton stays busy and moves with the season between her condos in Connecticut and Florida. In addition to visiting John's sister and family in Maine several times during 1988, she also helped to schedule trips for AARP members.

A. Ivan Johnson, president of A. Ivan Johnson, Inc., Arvada, Colorado, was appointed vice-chairman of the ASTM Institute for Standards Research, Inc. (ISR). The appointment was made by the ASTM Board of Directors on May 10, 1988. ISR is a subsidiary corporation, established by ASTM, to accelerate the development of technical information in

support of ASTM standards-writing committees. It will serve as the intermediary between ASTM committees and the public or private agencies that supply research and technical service.

We have been informed that Bob Kirkland fell while in Denver a couple of months ago. He broke both legs in addition to other "hurts." While recovering, he is conducting business from his bed, using a computer terminal, etc.

We hope that Dorothy Leeson has weathered her December surgery satisfactorily and that Elwood recovered from his surgical bouts. Seems that our members have been doing an unusual job of supporting the medical profession this year. Your assistant editor and wife Margaret have participated generously, but not necessarily pleasurably.

Al and Jean Leonard tell us that their late arrival in Seattle for the reunion was due to an automobile accident. Jean is recovering from whiplash caused by the incident.

As of mid-December, Ken and Mary Love were looking forward to having both daughters with them at Christmas. Janet also lives in Sacramento and Evelyn in Palo Alto.

Neal McClymonds along with daughters Erica and April continue to sightsee the west despite his continuing struggle with golf four times per week.

Jerry Meyer advises that the Geological Society of America recently published a list of 64 living geologists who have been members of the society for 50 years or more. It includes many of the giants of geology, and among them a number of famous hydrogeologists. Here is a sampling: Art Baker, M. P. Billings, R. C. Emmonds, M. King Hubbert, Tom Nolan, F. J. Pettijohn, Art Piper, Roger Revelle, and Vic Stringfield.

Stuart Meyers notes receiving NL 61 on December 5 and "as usual was immediately read with interest."

Last August Don Milliken co-led a group of 42 seniors (Sons in Retirement and wives) on a 3-day tour of New York City followed by a Bermuda cruise. He reports that wife Bea had



a mild stroke in October 1987 and a more severe one in September 1988 when she collapsed and crushed two vertebrae. She has recovered almost completely except for her speech for which she has six therapy sessions per week.

Maurice Mundorff is recovering nicely from triple by-pass surgery.

Ed Otton reports a busy year in his consulting business but still found time for them to visit relatives in Traverse City, Michigan, and to vacation for a week in the North Carolina mountains.

Irene Paulson has announced her intent to move to Crawford, Nebraska, in December after many years in the Denver area, to be nearer to family members. Irene was a mainstay of the Regional office for many years, and at the time of her retirement was secretary to the Regional Assistant Director of the Survey. Her new address will be 520 4th Street, Crawford, NE 69339.

Norm Payne was a Guest of Honor at the annual meeting of the Gulf Coast Association of the Geological Society of America in New Orleans, last October.

Lucille Peterson toured the Canadian Rockies in September.

On December 16, 1988, several WRD Retirees attended the Christmas party sponsored by P. E. LaMoreaux & Associates, Inc. Those attending included John G. Newton and his wife Jeanette, Joe Harkins and his wife Joyce, and W. J. (Bill) Powell and his wife Marilyn. The party was hosted by P. E. LaMoreaux, former District Chief, Ground Water and his wife Bunnie. The only retiree employed by P. E. LaMoreaux not attending was Richard Gardner who is working out of the Lakeland, Florida, office.

Claude Roberts is undergoing radiation therapy following the removal of a malignant tumor on his tongue. He notes that it takes a while to get over the treatments.

Chuck Robinove runs a business in rare and used books in Colorado Springs. Says he doesn't let the business interfere with fishing. He also is a guest lecturer on remote sensing at the University of Colorado in Colorado Springs.

Walt Scott writes from Australia about their continuing genealogical records research in Victoria, Tasmania, and New South Wales. They will get into South Australia next but they are looking forward to returning to America.

Eleanor Smith made a visit to her native state, North Dakota.

Dick Sniegocki advises that his new heart "plumbing" seems to be functioning well.

Frank Stermitz writes that they (?) have signed up with a rock-hound group to make a trip to Australia and New Zealand later this year. He and Florence will spend the winter in Mesa, Arizona, as usual.

Frank Swenson and wife Helen summer in Ft. Collins, Colorado, and winter in Sun City, Arizona. In between, their extensive travels included the Caribbean, London, Amsterdam, West Germany, Leningrad, Helsinki, Stockholm, Copenhagen, and Nova Scotia. Frank attended a GSA meeting in Denver last October.

Don Thomas has had a hip replacement. At the Washington area December luncheon he proved very adept with crutches.

Frances Thompson notes that she still drives her 1968 Dodge Dart. She is 88 years of age and still lives in the house she and husband David purchased in 1927.

Don Wiesnet presented a paper on Synthetic Aperture Radar applications at NASA's Workshop on the Commercial Use of Space Station Freedom in Denver last October. In November, he chaired a session of the AWRA Conference in Milwaukee.



## IN MEMORIAM

Margaret C. Anderson died on January 11, 1989, in Edina, Minnesota, of cancer. At the time of her death, she was co-president of the local chapter of the American Association of University Women. She was the wife of David B. ("Dave") Anderson, who at the time of his retirement in June 1973 was the Associate District Chief in the Minnesota District. She is survived by her husband, Dave; one son, David J.; and one daughter, Merideth Houge.

Helen Bidwell died on November 24, 1988, at the age of 75 in Forest Lake Minnesota, following a massive stroke in late October. She was the wife of Lawrence E. ("Larry") Bidwell, who at the time of his retirement in December 1974 was a Hydrologist with the Office of International Hydrology in Reston, Virginia. She is survived by her husband, Larry; two sons-Lawrence E., Jr. and Robert J.; two daughters-Ruth A. McCreery and Mary E.; seven grandchildren; and two great-grandchildren.

John E. Cummans died on October 21, 1988, in Tacoma, Washington, at the age of 63. He entered on duty as a Hydraulic Engineer in the Boise Surface Water office in January 1951. In 1960, he transferred to the Tacoma District where he retired in July 1981. He is survived by his wife, Mary Lou; three daughters-Nancy Lee Ebi, Peggy Ann Riccobuono, and Joanne Platt; and seven grandchildren.

Charles F. Hains died on December 22, 1988, in Northport, Alabama, at the age of 74 after a protracted illness. Chuck entered on duty as a Junior Hydraulic Engineer with the Division of Surface Water in Louisville, Kentucky, in March 1940. At the time of his retirement in August 1972, he was a hydrologist with Surface Water Branch in Tuscaloosa, Alabama. He is survived by his wife, Cora; two sons-Charles F. and David K.; two daughters-Coralie Hains-Bonner and Mary Kyle; and seven grandchildren.

Lura G. McLain died on October 30, 1988, in Rumford Maine, at the age of 86. She entered on duty as a Junior Typist in the Surface Water office in Augusta, Maine, on December 8, 1941, and in August 1955 was reassigned as Mathematical Aide, and at the time of her retirement in 1972 was a Mathematical Technician in that office. She is survived by a niece and a nephew.

Margaret H. ("Peggy") McNutt died on November 12, 1988, in Coeur d'Alene, Idaho, from a heart-related illness at the age of 61. She entered on duty in April 1949 as an Engineering Aide in the Denver Surface Water office. She resigned in 1954, and was reinstated in September 1965 as a Hydraulic Engineering Technician in the Denver Regional Office, where she retired in January 1975. She is survived by her husband, DeWitt, and several children.

Raymond L. Wayland died on November 3, 1988, in Chamblee, Georgia, from a heart attack at the age of 67. He entered on duty in April 1962 as a Physical Science Aide with the Quality of Water office in Baton Rouge, Louisiana. At the time of his retirement in July 1984, he was a Physical Science Technician with the QW Central Laboratory in Doraville, Georgia. He is survived by his wife, Helen; two daughters-Linda Kay Neff and Janet Rae Fellows; and five grandchildren.

Word has also been received that Robert L. Taylor died on December 26, 1988, in West Palm Beach, Florida, at the age of 77. He entered on duty as a Junior Hydraulic Engineer with the Division of Surface Water in Ocala, Florida, in March 1941. In June 1955, he resigned his position as Hydraulic Engineer to accept a position with the newly-established Central and South Florida Flood Control District. The names of survivors were not available at press time.



## MEMOIR

### WARREN W. HASTINGS, 1911-1988

Warren W. Hastings, whose lengthy career as a USGS hydrologist spanned the period 1937 to 1973, died June 18, 1988, at Arlington Hospital, Arlington, Virginia. He had received medical treatment for several years following heart by-pass surgery. Warren was an early leader in enhancing Survey's programs in hydrology by stressing the importance of evaluation of data for practical application. His career flourished first as a water quality specialist and later as an administrator of the Water Resources Division's regional and national operations and research. Throughout his career he was regarded as a skilled leader dedicated to strong technical organization and management and an advocate of changes required to achieve good results. A tall, gracious man, he was highly visible and a commanding presence in any gathering.



Warren was born April 6, 1911, in Bexar County, Texas, and received his early schooling there. In 1935, he received his B.S. degree in chemistry and agricultural science from the University of Maryland. Like so many USGS. colleagues of his generation, he earned part of his tuition playing in a local dance band. I recall the natural ease with which he gathered friends around the piano for a song session in later years.

He first entered government service in 1935 with the Department of Agriculture in Washington, D.C., assigned to laboratory studies of physical and chemical properties relating to molecular structure of cotton fibers. In Washington, he met Ruth Bissett, and they were married in 1935. The family grew to four with the addition of two children: Margaret (Peggie) and Stephen. Ruth died in 1970.

Warren's USGS career began in 1937 with the Quality of Water Branch laboratory, Washington, D.C., under the tutelage of pioneers W. D. Collins, C. S. Howard, and S. K. Love. Successive field assignments followed, beginning in 1939 to Pecos, Texas, as chemist in charge of part of hydrologic studies conducted under the Pecos River Joint Investigations, Texas. At the close of the Pecos River Investigations in 1941, he was assigned to Austin, Texas, where over the next several years interest by State Cooperators and local irrigation districts resulted in cooperative hydrologic studies in Texas and adjoining States during the war years. He directed the expansion of the Texas District's water quality studies to include programs in Oklahoma, Arkansas, and Louisiana relating to water quality conditions in the Red River and Arkansas River basins. These were unique studies prompted by post-war problems in water development and use.

Warren often spoke of these progressively more complex field assignments as having given invaluable experience for his next assignment, in 1948, to Washington headquarters as Chief, Technical Reports Section, Quality of Water Branch. It was a period of increasing emphasis on technical interpretive reports, and he pioneered the landmark annual report series of water quality data. Three years later, in 1951, he was designated Assistant Chief, Quality of Water Branch, and assumed much of the Branch program development and personnel management. This included a much needed scientific training programs for the Branch staff faced with emerging problems in water quality in the 1950's.

A key headquarters assignment came in 1953 when he was detailed with others to develop a basic reorganization plan of the Water Resources Division, elements of which were later included in recommendations to the Secretary of the Interior.

A major change in Warren's career came in 1961 when he was assigned to Menlo Park, California and designated Division Hydrologist, Pacific Coast Region. There he coordinated programs of the Surface Water, Ground Water, Quality of Water and General Hydrology Branches in the seven State area. In 1965, as part of the Division's field reorganization, his position was redesignated Regional Hydrologist with supervisory authority over the seven-state region of Alaska, California, Hawaii, Idaho, Nevada, Oregon, and Washington.

In 1968, Warren received the Department of Interior Distinguished Award in a citation that read "As one of the Water Resources Division's first Regional Hydrologists under a new concept of operation his skillful guidance brought about the orderly transfer and smooth operations during the critical period of transition." He returned to Washington headquarters in 1972 as Assistant Chief Hydrologist for Research and Technical Coordination and retired in 1973.

He was an active member for many years of numerous professional and technical societies that included the American Chemical Society, American Geophysical Union, American Association for the Advancement of Science, International Association of Scientific Hydrology, American Water Works Association, and the Cosmos Club. He authored or coauthored about 30 papers and reports in hydrology, mainly in relation to water quality and research leading to problem solving.

Warren and Isabel Picken were married in Arlington, Virginia, October 1971, and enjoyed many years of world travel, shared long-time friendships with numerous Federal personnel and were gracious hosts to friends. He shared his love for the soil with Isabel, and their yard and a nearby garden plot were well-groomed and colorful.

The careers of many of us were enhanced by Warren, and he touched our lives with his gentle compassion and steady encouragement. His grace, strength, and intelligence are fixed in the memory of his Division colleagues, friends and family

He is survived by his wife Isabel, daughter Margaret Reaves, and son Stephen. (W. H. Durum)



# THIRD SUPPLEMENT TO MEMBERSHIP DIRECTORY (14th EDITION)

## NEW MEMBERS

Asselstine, Erwin S. ('74) (Elizabeth), 25603 Midgebrook, Spring, TX 77380  
 Ballance, Wilbur C. ('79) (Marguerite), 8412 Cherry Hill Drive, NE,  
 Albuquerque, NM 87111  
 Barnwell, William W. ('85) (Audrey) (former Affiliate), P. O. Box 1372,  
 Anchorage, AK 99524  
 Bergman, DeRoy L. ('85) (Jean), 4400 N.W. 11th Terrace, Oklahoma City,  
 OK 73107  
 Boettcher, Arnold J. ('88) (Lou), 11063 W. Mexico Drive, Lakewood, CO 80226  
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