

USGS RETIREES

NEWSLETTER No. 185

November 2019

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

PRESIDENT'S MESSAGE

Dear Fellow USGS Retirees,

The leaves have fallen in St. Paul and winter is just around the corner. Your officers have had a busy summer and fall as we continue to work on the viability of the organization. Mark Anderson and Pete Anttila continue to lead a group that is planning for our next reunion that will be in Tucson, AZ in about a year. Downward trends in membership continue to be of concern. One focus of our strategic plan is to be more proactive in attracting new members. To accomplish this, we are reaching out to newly retired employees and retirees who "got away without joining". In addition to Affiliate Members, we now have an Affiliate Liaison Member (Liaison) status. Liaisons are active employees who will work with our State Representatives as eyes and ears in each state office. We have recruited Liaisons in several states and are looking for others. We simply ask our Liaisons to promote our organization and to let us know who is retiring, and sadly, who has passed.

We have completed a draft strategic plan which is posted on our website (<http://www.wrdretirees.org/>). Your comments are always welcome. In addition, we have a group of volunteers, in Reston, who are documenting files, pictures, and videos. If you are interested in helping, please contact Dick Engberg or Herb Freiburger.

We also are asking you to adopt suggested changes to our bylaws, as noted in this newsletter on pages 3, 4 and 5. The suggested changes clean up some definitions of officer responsibilities, defines the responsibilities of the Affiliate Liaison Members, and allows the President and Vice President to be re-elected for a second consecutive term. The changes to the bylaws will be adopted upon approval by a majority of members voting. Please cast your vote on these changes. I would recommend approval of the changes to our bylaws.

The scholarship process for 2019 is complete and we have awarded scholarships to Taylor Dudunake, in ID, and to Sharon Mulready, in CA (reference page 9 of the newsletter). We are now beginning the process for 2020.

With this edition of the newsletter, we are holding our bi-annual election of officers. Our National Officers and Regional Representatives are elected to serve two calendar years. Regional Representatives may, if re-elected, serve a second consecutive two-year term. The Secretary, Treasurer and Archivist can serve unlimited terms if re-elected. The President and Vice President are not eligible for re-election for consecutive terms. Later in this newsletter we will be asking you to change our bylaws so that the president and Vice President can serve consecutive terms after future elections. (Short bios appear on pages 6 and 7, the Ballot appears on page 8).

Our Treasurer (Cathy Hill), and Secretary (Kate Flynn), as well as our Regional Representatives for the Central Region (Ken Lindskov) and for the Southeast Region (Ed Martin) have all agreed to serve another term. We are fortunate to have them continue to be involved. I am very pleased to be able to tell you that Pete Anttila has agreed to be on the ballot for President. I have known Pete for many years. He has worked across the country and retired as the Associate Regional Hydrologist, Western Region. Pete has a passion for this organization and is currently involved as the Western Region's Representative. I also am pleased to be able to announce that Norm Grannemann has agreed to be placed on the ballot as the Northeast Regional Representative. I've known Norm for many years and have great respect for him. Jeff Stoner has agreed to continue to serve as our Newsletter Editor as a nominee. Jeff held a number of progressively challenging positions before he retired as the Program Manager in the Midwest Region. He will do a great job as our editor. We are missing a candidate for Regional Representative for the Western Region. Please let me know if you would be willing to serve in that capacity. You could be appointed.

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Web Page: <http://wrdretirees.org/>
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Newsletter Staff:
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CR: James (Jim) Bennett
WR: John Klein

Regional Directors:
Norm (Norm) Grannemann, Northeast
Edward H. (Ed) Martin, Southeast
Ken Lindskov, Central
Peter W. (Pete) Anttila, Western

National Officers:
James (Jim) Stark, President
Alberto (Al) Condes, Vice President
Kate Flynn, Secretary
Cathy Hill, Treasurer
Richard (Dick) Engberg, Archivist

Special recognition and thanks are given to outgoing board members Al Condes and Dick Engberg. Al retired 25 years ago. He has served and supported the Retirees' Organization as Vice President since 2012 and participated in many of the Reunions as a volunteer. Dick retired 20 years ago. For the past 16 years Dick has served and supported the Retirees' organization as the Archivist of historical documentation (i.e., including videos, interviews, and many other related documents), and has also participated in many of the Reunions. Both Al and Dick have demonstrated their strong connection to the organization and its members, which is hard to quantify with just a 'thank you for your service.'

As always, I want to thank our officers and staff volunteers for all they do to support our organization. As I mentioned, there are positions that we need to fill outside of the election process because we do not have candidates. Please let me know if you have interest in serving this organization.

It has been an honor to serve as the President of this organization and I'll sign off, formally, in the next edition of our newsletter. Our organization is limited only by the number of volunteers who get involved. I hope you enjoy reading this newsletter. Thanks for your support of this organization.

We always are seeking "News" from you for the next newsletter,



Jim Stark
stark@usgs.gov

Do I owe dues to USGS Retirees?

The year your dues have been paid through is included with your newsletter. If you receive a paper copy of the newsletter, the year is printed in the upper right of the mailing label. If you receive an electronic copy, you can find your name and the year in the file that is included in the transmission email. For example, if the year is 2014, you have paid for 2014 and you owe dues for 2015 through 2019 (\$50). If the number is 2019, you are current with your dues.

Dues are \$10 per year (great value) and can also be paid in advance. Make a check to USGS Retirees and mail it to "USGS Retirees, P.O. Box 280, Herndon, VA 20172-0280." Extra contributions are welcomed and appreciated, so indicate how much of your check is for dues and how much is a contribution. If you think an error has been made in recording your past dues payments, notify Kate Flynn at wrretirees2014@gmail.com.

We are asking the Members to adopt the suggested changes to our Bylaws. Below is an updated version of the Constitution and Bylaws of the USGS Retirees' Organization. The suggested changes clean up some of the definitions of the responsibilities of the Affiliate Liaison Members and allows the President and Vice President to be re-elected for a second consecutive term. The changes to the bylaws will be adopted upon approval by the majority of members voting. To vote please respond with a **Yes or No** vote to the **updated Bylaws 2019** (in the heading) via email to wrretirees2014@gmail.com or by regular mail to: Secretary, USGS Retirees, P.O. Box 280 Herndon, VA 20172-0280 **by December 28, 2019**.

CONSTITUTION AND BYLAWS

Mission Statement

"An organization of the earth science disciplines of the U. S. Geological Survey whose purpose is to keep its members in touch with each other and their former agency."

Constitution

Membership Application Charter

ARTICLE 1: NAME

USGS Retirees' Organization of the U. S. Geological Survey (Organization)

ARTICLE 2: PURPOSE

The purpose of this nonprofit organization is to assist its members to keep in touch with one another and with the activities and personnel of the Geological Survey.

Bylaws

BYLAW 1: MEMBERSHIP

Section 1. Members of "USGS Retirees" shall be composed of those retired applicants who have served with units of the U.S. Geological Survey. Members may vote and hold office in the Organization.

Section 2. Affiliate Members of "USGS Retirees" shall be composed of applicants from active personnel of the USGS, whom may fall into two categories of (1) Affiliate or (2) Affiliate Liaison.

Section 3. Surviving spouses/partners of members or affiliate members shall upon request or based on known interest continue to enjoy the privileges of affiliate membership and shall be listed among the members in subsequent directories. Expression of continued interest may be solicited by the USGS Retirees' Board of Management (Board) from time to time in order to manage the organizational roles prudently.

Section 4. Friends may be (1) retirees of the Department of the Interior and its other bureaus, (2) retirees of Federal, State, or local organizations who have had long association with, and desire to remain in contact with, our membership, or (3) other retired persons allied with USGS by professional background or activities.

BYLAW II: DUES

Section 1. Annual dues, payable at the beginning of each year by Members and Affiliate Members, shall be set by the Board at a level to cover the relative costs of preparing and mailing the Newsletter and other communications, the Scholarship Program, and to pay other necessary incidental expenses. Contributions in excess of dues are welcome. The payment of dues by surviving spouses and Affiliate Liaisons shall be waived.

Section 2. Members and Affiliate Members whose dues have not been paid by the fourteenth month following the end of a dues year despite requests for such, will be assumed no longer to be interested and will be removed from the rolls by the Board unless there is evidence that health or other mitigating circumstances are a factor.

BYLAW III: OFFICERS, REPRESENTATIVES, AND BOARDS

Section 1. There shall be six elected National Officers consisting of President, Vice President, Secretary, Treasurer, Newsletter Editor, and Archivist; and four elected Regional Representatives, each representing a geographical region like that used by the Water Resources Division during 1996. The elected officers shall constitute the Board. Each Regional Representative shall appoint a Regional Editor or shall serve as Regional Editor. The term of office of the Newsletter Editor and Regional Editors shall be two years; however, each may be reappointed by successor Presidents and Regional Representatives. The Newsletter Editor, Regional Editors and Layout Editor shall constitute an Editorial Board, chaired by the Newsletter Editor, whose purpose shall be to implement Newsletter policies and practices leading to optimal quality, accuracy, balance, and content of the Newsletter. The Newsletter Editor shall be responsible for the final content and composition, and for reproducing and distributing the Newsletter.

Section 2. The Officers shall be elected by the membership. They are to serve for a period of two calendar years. Any vacancy shall be filled by the Board until the next election. The President and Regional Representatives may serve a second consecutive two-year term if re-elected. The Vice-President, Secretary, Treasurer, Newsletter Editor, and Archivist may serve for an unlimited number of terms if re-elected.

Section 3. The President shall preside at meetings of the Organization, chair the Board, sign all written contracts and obligations of the Organization requiring endorsement, and perform such duties as the Board may assign. The Vice President, or if unavailable, the Secretary, shall discharge the duties of the President during the absence or disability of the latter or during a vacancy in that office.

Section 4. The Secretary shall keep the minutes of meetings of the Organization and of the Board, notify the members of their election, conduct appropriate correspondence and keep membership records and other organizational files, all of which shall be open to inspection by Board members at reasonable times.

Section 5. The Treasurer shall (1) receive and bank all collected funds, (2) make or order all disbursements in consultation with other Board members when appropriate, and (3) report budget status annually, or more often if required by the Board. Accounts shall be audited annually by a qualified person selected by the Board who shall submit a report thereon to the Board. The Secretary shall act for the Treasurer, if necessary.

Section 6. Regional Representatives shall function as representatives of the Board as field points of contact for the Board. Specific duties will be assigned or suggested by the President.

Section 7. The Archivist shall maintain records, reports, photographs or other memorabilia deemed by the USGS Retirees or the USGS to be of historical interest or significance. Archival material shall be sorted, filed and indexed to facilitate retrieval and use.

Section 8. State Representatives are appointed by the Regional Representatives of the respective regions. State Representatives are retired USGS employees who maintain contact with Water Science Center staff and retirees. They promote and coordinate local meetings of retirees, serve as contacts with retirees and future retirees, forward information to retirees, maintain communication between Water Science Centers and the Organization, recruit newly retired USGS personnel, and mentor and monitor academic progress of scholarship recipients.

Section 9. Affiliate Liaisons are appointed by the Regional Representatives and by the State Representatives in consultation with the Water Science Center Director. Affiliate Liaisons are active USGS employees and serve as an interface, in cooperation with the State Representatives, between the Water Science Center and the USGS Retirees' Organization. Affiliate Liaisons serve as contacts to future retirees regarding the organization. In addition, they forward information from Water Science Centers to State or Regional Representative regarding science results, social events, retirements, and memorials. They also promote and encourage qualified employees to apply for the Retirees' Scholarship Program, scan meeting minutes from monthly Board meetings, and attend two meeting calls each year. Affiliate Liaison Members are provided with a free membership to the Organization.

BYLAW IV: NOMINATIONS AND ELECTIONS

Section 1. The biennial election of National Officers and Regional Representatives shall be held in November of odd-numbered years.

Section 2. Nominations for National Officers and Regional Representatives may be made by any member at any time through September preceding the November election. The Board shall be the nominating committee and shall announce, in an appropriate issue of the Newsletter, the slate of nominees for each office together with a ballot on which the names of other nominees may be entered and voted upon.

Section 3. Three members of the Board shall act as judges of the election, count the ballots and declare elected the person receiving the largest number of votes cast for each of the offices. In the event of a tie, the election will be determined by the Board. Election results will be announced in the Newsletter.

BYLAW V: COMMITTEES

Section 1. The President may create committees of no less than three members each to carry out the functions of the Organization; and shall designate a head of each committee, fill vacancies as they occur, and specify the form in which the committee shall report its activities.

BYLAW VI: ADOPTION OF CONSTITUTION AND AMENDMENTS

Section 1. This constitution is a recodification and revision of articles adopted by the membership by ballot in 1974 and was amended and approved by a majority of members voting in 1991, 1992, 1998, 2003, 2004, 2007, 2015 and 2019.

Section 2. Future amendments petitioned by members or proposed by the Board shall be adopted upon approval by a majority of members voting.

September 2019

ELECTION OF USGS RETIREES OFFICERS: 2020 - 2021 BIENNIUM

It is election time. The slate of candidates, selected by the Board of Directors, is shown below with a brief biographical sketch for each.

President, Peter (Pete) Anttila: Pete is currently serving as the Regional Director for the Western Region and as State Contact for Tennessee. He was the Chairman for the Local Arrangement Committee (LAC) for the 18th Biennial Retirees Reunion held in 2016 in Nashville, TN. He served on the LAC for the 19th Reunion and is serving on the LAC for the 20th Reunion. Pete graduated in the first Environmental Engineering Class in the Civil Engineering Department at Tufts University. Three months later he began a career of almost 37 years with WRD. Chronologically: He was in the Ohio District for almost 11 years working in fluvial sediment, surface water network analysis, urban runoff, and water quality; 2+ years in the Michigan District as Water Quality Specialist; almost 12 years in Sacramento, CA as the Investigations Section Chief for the Subdistrict and, subsequently, as the California Assistant District Chief for Investigations; and 12+ years in the Office of the Western Regional Hydrologist (RH) in Menlo Park, CA as Assistant RH for Programs and, subsequently, as Associate RH. He is a recipient of the Interior Meritorious Award. Pete and his wife, Joyce, have lived in Fairfield Glade, TN since his retirement in 2002.

Vice President, D. Phil Turnipseed: Phil began his USGS career with the Mississippi District in 1987 working on hydraulic bridge design and subsequently became project chief, Surface Water Records Unit for 10-years. He served as the Texas Surface Water Specialist then principal USGS liaison to the U.S. Army Corps of Engineers in Reston, Virginia (2004-2010). He was Director of the U. S. Geological Survey's National Wetlands Research Center (2010-2014) guiding global expertise in forest and wetland ecology and geospatial design and application. In 2015, Phil served as Senior Science Advisor for Water Programs for the USGS Southeast Region. Phil has published over 80 peer-reviewed reports, journal articles, conference proceedings, and posters and speaks fluent Spanish and some limited French. He was a registered professional engineer in Mississippi and Louisiana and an at-large member of the American Academy of Water Resources Engineers Board of Trustees and has maintained as scientist emeritus since retiring in 2015.

Secretary, Kate Flynn: Kate began her career with USGS in 1974 as a hydro tech at the Gulf Coast Hydroscience Center in Bay St Louis, MS; working on the Flood Plain Simulation and Deterministic Modeling projects. In 1984, she transferred to the Office of Surface Water in Reston. In Reston she worked with watershed modeling software and flood and low flow frequency software, providing user support and training on the software to Water Science Center staff. Kate retired in 2016.

Treasurer, Cathy Hill: Cathy began her career with USGS in 1976 as a physical science aid in the Atlanta lab. From there she moved to the Georgia District as a Hydrologist, then Office Chief of the Statesville Sub-district Office. This was followed by Project Leader and Data Section Chief in the Raleigh Office. From there she went to the Director's Office as Staff Assistant, then the Northeast Region as Area Hydrologist, followed by WRD Operations Chief, etc. The key position in terms of taking on the Treasurer responsibilities is the Operations Chief where she oversaw the WRD budget that was in the millions of dollars. She retired from the USGS in 2006.

Archivist, Herb Freiburger: Archivist, Herb Freiburger: Herb worked two coop periods with the USGS WRD and graduated from Drexel Institute of Technology, Civil Engineering. In 1967, he began his career as an entry level Hydraulic Engineer with USGS, Trenton, NJ working mostly in the data section and later as co-project leader on a flood study. In 1970, He transferred to Miami, FL as a project member on water-quality studies in the Big Cypress Swamp and Everglades. In 1973, he transferred to Louisville, KY to become the Chief, data section for Central and eastern, KY. He then transferred to Reston, VA in 1977 to complete a management trainee program in the Northeast Region. This was followed by a transfer to Baltimore, MD in 1980 where in succession became the District Chief, MD-DE-DC, Area Hydrologist, Mid-Atlantic Area and later Program Officer, Northeastern Region. Herb retired from the USGS in 2002. He served as President, WRD Retirees Association in 2011-2012

Northeastern Region, Norman (Norm) Granneman: Norm retired in 2016 after a 39-year career with USGS. Over these years, he oversaw, in reverse order, the USGS Great Lakes Restoration Initiative programs, Groundwater Resources Program activities, the Michigan Basin RASA study, and groundwater projects in the Michigan Water Science Center. Norm and his wife Karen live in Okemos, Michigan. They have two grown children and one grandchild. They all spend as much time as possible on what remains of the Grannemann Century Farm in Missouri where Norm was born and raised.

Southeastern Region, Edward H. (Ed) Martin: Ed Martin began his career with the USGS in 1976 in the Jonesboro, Louisiana Field office. His forty-year career included duty locations in Louisiana, Colorado, Florida, and Georgia. As a manager he was the District Chief of the WRD Louisiana District 1993-1998 and District Chief/Director of the Georgia Water Science Center, 1998 to 2016. He retired in 2016 and now lives with his wife in Lawrenceville Georgia

Central Region, Ken Lindskov: Summarizing his 33-year WRD career in support of another 2 years as Central Region Representative for USGS Retirees. He received an Engineering degree in 1965 with Chi Epsilon honors. His first job was with USGS in Kansas where he operated streamflow stations, completed short assignments in water quality and ground-water, and graduate work at the University of Kansas. He then conducted hydrologic studies in Raleigh, NC, and St. Paul, MN. In 1977, he moved to Salt Lake City to head a large water resources study of potential impacts of oil-shale development on water resources. In 1988, he became Hydrologic Studies Chief in North Dakota. In 1991, he became Sub-District Chief in Rapid City, SD and later was selected as South Dakota District Chief.

Western Region, Peter (Pete) Anttila: Pete is currently serving as the Regional Representative for the Western Region and volunteered to be considered again in that position until a replacement is appointed. (See his biographic sketch above).

Newsletter Editor, Jeff Stoner: Jeff became a hydrologist in Billings, MT in 1974. He also did science in Pittsburgh, PA, and St. Paul, MN. He became a Studies Chief and NAWQA study-unit Chief in Minnesota. He became the NAWQA Nutrient National Synthesis Chief out of Denver. He returned to St. Paul to be District Chief. With all these chiefdoms, he decided to try Program Officer for the North Central Area and then Midwest Region. He retired in 2014 in Minnesota with his wife Linda.

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(DETACH BALLOT HERE FOR MAILING OR SUBMIT ELECTRONICALLY)

MAIL TO: Secretary, USGS Retirees
P.O. Box 280 Herndon,
VA 20172-0280

OR EMAIL BALLOT COPY TO: wrdretirees2014@gmail.com

ELECTION OF USGS RETIREES OFFICERS: 2020 - 2021 BIENNIAL BALLOT

Vote for one person for each National office and a Regional Director in **your** Region. Vote for either the nominee shown or another Retiree whose name you must enter in the blank space to the right of the nominee. Complete the ballot by placing an "X" in the parentheses to the right of that candidate. Print your name and provide your signature. Mail your completed Election Ballot to:

Your ballot must be received by December 27, 2019. A brief biographical sketch for each nominee appears on pages 6 and 7 of this Newsletter.

Write-in Candidate(s)

President:	Pete Anttila	()	_____ ()
Vice President:	Phil Turnipseed	()	_____ ()
Secretary:	Kate Flynn	()	_____ ()
Treasurer:	Cathy Hill	()	_____ ()
Archivist:	Herb Freiburger	()	_____ ()

Regional Director: **Note** -- vote **only** for a candidate in **your** Region

Northeastern:	Norm Granneman	()	_____ ()
Southeastern:	Ed Martin	()	_____ ()
Central:	Ken Lindskov	()	_____ ()
Western:	Pete Anttila	()	_____ ()
Newsletter Editor	Jeff Stoner	()	_____ ()

Members Name: (Please print): _____

Members Signature: _____

2019 RETIREES' SCHOLARSHIP WINNERS

Since the program began in 2006, our organization has awarded 28 scholarships, totaling \$65,700.



Taylor Dudunake writes: As a young professional in an evolving world of science, I'm eager to begin each day on the job working as a student hydrologist for the USGS. When I first started as a student contractor three years ago, I began coordinating with folks from across the country working with various state and federal agencies to facilitate a national bridge scour study. I thoroughly enjoyed meeting and learning from these people with many different backgrounds all while getting the opportunity to write two USGS Open-File Reports. Soon after, I transitioned to a Pathways Student while traveling near and far across Idaho getting invaluable experience including high-resolution bathymetric surveys and river restoration and water quality monitoring. Idaho offers incredible diversity in our rivers which support the livelihoods and lifestyles for those of us that call this home. As I

grow older, I recognize the benefit of growing up in a state where people truly value the amazing recreational opportunities that we have here. As I grow and develop my professional career, I'm even more grateful that my job allows me to experience the amazing assets in this state alongside other like-minded employees. I'm very humbled to write this letter of appreciation to the USGS Retirees for awarding me this scholarship. As I balance the complexities developing my career, I am also pursuing my Masters of Science in Water Resources at the University of Idaho where I'm studying the effects of bathymetric variations and vegetation on hyporheic exchange using various modeling techniques. I am extremely thankful for this scholarship as it will help relieve some of the costs in attending graduate school. I also would like to acknowledge everyone at the Idaho Water Science Center alongside my family and friends for their continued support. I'm excited for my future and hope to further contribute to the science of our changing world! With thanks and appreciation,



Sharon Mulready writes: I wish to offer my sincerest thanks for receiving the 2019 WRD Retirees scholarship. This funding greatly eases the burden for tuition as I complete my master's degree in Earth Science at the University of California, Santa Cruz, CA. My Master's project involves determining the degree to which downstream grain size fining, channel slope, and flow depth control the shear stress exerted by the river on its bed by sampling point bar sediments, determining high flow depths, and DEM analysis along the Arroyo Seco, one of the Santa Cruz field office's gaging sites. My field work has been greatly supported by the Santa Cruz office's team in their patience and inclusiveness to train me in the field and sediment lab. I am greatly indebted to the USGS as a whole in their support of early career scientists. My goal once I graduate is to continue to work within the USGS and learn to manage the public's water resources in an efficient

and sustainable manner by providing the most accurate data with the highest scientific integrity. I offer my sincerest gratitude for the opportunity to continue my education in academia and at the USGS unburdened by tuition costs.

RETIREES' SCHOLARSHIP PROGRAM – 2019 AWARDS

Since the program began in 2006, our organization has awarded 28 scholarships. Including this year's awards, we have awarded \$65,700 in all.

YEAR	NUMBER of AWARDEES	AMOUNT	REMARKS
2019	2	4000	
2018	5	8700	
2017	0	0	Retirees' President decision
2016	3	6000	
2015	2	7000	
2014	2	8000	
2013	0	0	Summer Hiring Freeze
2012	3	10000	
2011	4	10000	
2010	2	5000	
2009	2	2500	
2008	1	1500	
2007	1	1500	
2006	1	1500	
TOTAL:	28	\$ 65,700	

NOTE: A complete listing by Fiscal Year, awardee's name, amount of award and educational institution attending, can be found at:
<http://wrddretirees.org/scholarships.htm>

MEETINGS AND GATHERINGS

IN - USGS RETIREES Indianapolis, IN August 27, 2019



From left to right: Jay Keisler, Jeff Martin, Lee Watson, Dave Cohen, Dave Voelker, Cheryl Silcox, Keith Bobay.

USGS RETIREES, SPOUSES AND GUEST, SPRING LUNCHEON RALEIGH, NC MAY 9, 2019



FIRST ROW (SEATED -- LtoR): Kay Naugle, Nancy Coble, Charles Daniel, Myra Daniel

SECOND ROW (LtoR): William Robbins, Jeanne Robbins, Shirley Lea, Ron Coble, Tim Spruill, Rose Pinnix, Charlotte Lloyd, Bruce, Lloyd, Rose Mary Lunsford, Nelson Williams, Nancy Garrett, Gary Garrett

Everyone had a good time. We plan to meet again in October 2019.

**WA – USGS RETIREES
Potluck Luncheon – Host by the Williamsons**



Attendees (LtoR): Dave Kresch, Sandy Williamson, Jan Kresch, Denny Cline, Phil & Patrice Carpenter, Matt Bachmann, Greg Justin, Marlene & Gil Bortleson, Norm Dion, Tony & Joan Paulson

**RESTON-HERNDON RETIREES' LUNCHEON
October 6, 2019**



Luncheon of Reston-Herndon Retirees on Oct. 7, 2019. Ken Lanfear spoke about his travels in England with many interesting slides. Members from the water and geology disciplines attend these luncheons each month.

USGS-CR RETRIEES' FALL LUNCHEON
Olive Garden
October 3, 2019



Front Row (Seated LtoR): Donna Myers, Merilee Bennett, George Garklavs, Judy Cornwall, John Elliott, Gladys Erdmann

Second Row (Standing LtoR): Rich Hawkinson, Sharon Powers, Barb Ruddy, Janice Ward, JoAnn Huffman, Paula Blakey, Carole DeHerrera, Karen Lystrom, Sandra Duncan, Mary Kidd, Juan Vasquez, Dave Erdmann, Jim Bennett

Third Row (Standing LtoR): Ann Mullin, Alan Burns, Lee Case, John Flager, Betty Palcsak, John McLean, Jim Blakey, Dave Lystrom, Bob Jarrett, Bob Ugland, Carolyn Ugland, Anita Livingston, Russ Livingston



NEWS OF RETIREES

Pat Clark, formerly of WRD in Augusta, Atlanta (NWQL lab, Georgia District and Regional Offices) and Texas District. I retired from USDA, NRCS out of Bangor, ME, in 2009 with 33 years of federal service following a brief period with the National Park Service in Maryland. Thanks to Derrill Cowing (Maine WRD), I was invited to join the WRD retirees in 2014. I'm still in touch with a few scattered friends across the country. Husband Clair 'Chief' and I have enjoyed many travels – 6 times across our own beautiful USA in our camper that included most of Route 66 and several national parks. There is so much to see and do in our land. We've been overseas to Australia and New Zealand for a month and spent another month touring the entire UK. I have gone (with others) for fabulous trips to Machu Pichu and the Galapagos and a 4-island visit via small ship to the Hawaiian Islands. Last summer we toured Alaska for two weeks - for me that was the 50th state visited – he only has 49! This September we will finally get to Nova Scotia and Prince Edward Island after living next to them most of our lives. I keep myself occupied with volunteer work at a greyhound rescue shelter in Augusta, our local historical society, and serve on 3 boards/committees in our rural Maine town. Clair still has his hand in his former auto body repair work keeping friends' and neighbors' cars on the road. Life is good! I hope to make it to Arizona in 2021.

Kent Crawford writes: As a member of the Pennsylvania Water Resources Advisory Committee, I recently heard a presentation about how the PA DEP is doing some monitoring for emerging contaminants. This work is building on work that I did near the end of my working career. So, thank you Bill Foreman, Ed Furlong, Mike Meyer, and Tom ???? for devising the analytical methods for doing these cutting-edge analyses over a decade ago. I recently assisted my spouse, Beverly Cigler, in analyzing and presenting a report about priorities for local government officials. This involved some pretty simple graphics using Microsoft Excel. It all turned out very nicely and I was proud of myself! I think Bev and I made a great team, as we have for the past 49 years! My next task will be to help prepare a "Water Quality Handbook" for local governments. How do I get myself into these things??? Tomorrow is my 73rd birthday and life is good. Regards to everyone.

Jack Fischer writes: Thanks for all the effort on our behalf!

Charles Gamble writes: Rebel and I have finally moved after waiting months for the facility to be completed. We are in a senior living facility not far from where we were. Our new address is: 9045 Church Street east, Apt 2003, Brentwood, TN 37027. It has 191 units consisting of independent living, assisted living, and memory care. Our phone number remains the same as shown in the directory. My cell number is 615-828-7019. The facility is very nice, and the staff and residents are very friendly. It seems that we stay busy with various activities in the Church, volunteering at Healing Hands International (17 years), and gardening for me and sewing club for Rebel. Her mobility has deteriorated with bad knees and back surgery several years ago, but I am still going fairly, well for which I am thankful. The move was hard, but we are about to get settled in. Thanks to all who are involved in getting the newsletter out as well as other activities.

Linda Gerner (new Affiliate Liaison for UT) writes: I started working for the USGS in 1985 as a student, was hired on a temporary appointment in 1988, and was converted to permanent in 1989. In Nov of 2000, I decided to take a leave of absence to spend more time with my then, young children. I returned to the Utah Water Science Center in January of 2012 and have been here ever since. While my husband is two and a half years away from his own USGS, UT WSC retirement, I must make up for lost time and will be here for at least 5 years, maybe longer. Through those years, I have seen many exceptional administrative specialists, IT specialists, hydrologists, technicians, research scientists, and more retire. Several have stayed as emeritus, but we have indeed lost touch with far too many. The USGS and the Utah Water Science Center continue to grow and move forward only because of what those who have gone before us have done. It is important to build that bridge between the past and the present and keep it strong; one day we will all cross it. Thanks for considering me as a candidate for Affiliate Liaison. Best regards

George Gravlee's daughter writes: George and Diane have hung up the keys to our motor home after traveling all over the US for 25 years, as they helped build homes with Habitat for Humanity. We build in all 50

states and impacted the lives of over 300 families. Medical issues have forced them to leave their home base in South Carolina and move up to West Hartford, Ct to be near their daughter.

George "Tom" Higgins writes: I have retired from my second job. I began my "part-time" FEMA career in 2000 as a 406-Mitigation Specialist -- after working 37 years as a Hydrologist for the Water Resource Division of the US Geological Survey. I was talked into it by a former USGS boss, Phil Carpenter, who had gotten involved in FEMA. At one time we had 8 or 9 retired USGS'ers in R-10 Mitigation. The 406-group was essentially a part of the Public Assistance (PA) Section since Mitigation and PA worked and trained so closely together. R-10 Protocol had us transferred to the PA Section, after we were deployed. Prior to the advent of DTS, I was the 406-Lead for many R- 10, Washington, disasters--which meant commuting from 28-48 miles each way from home. I was lucky when I worked at the R-10 office, because it was 53 miles (which would take from 1 to 3 hours to drive), so I got expenses. I was also Deployed to a couple of Oregon and Alaska disasters--as well as, disasters in 6-7 other States (assigned to R-10 as a unit), including the Mitigation Section being sent to Florida for the 2005 Hurricane Disasters--usually as the 406-Lead. Since the implementing of DTS, I've been Deployed to disasters in 9 Eastern and Central States--usually as a HM 406-Specialist. My DTS Title was HM HPA Task Force Leader but the "Computer" usually Deployed me as a 406-Specialist. Finally, during the last 3 years, I've been Deployed, as the HM 406 Crew Leader, to 2 Oregon Disasters (9 months), 4 Idaho disasters (7 months) and 3 Alaska disasters (6 months). It was great to work as a unit again--as part of a R-10 Team. As an Annuitant, there has always been the problem of only working for 120 days (after the disaster is declared) --so you can't start early or many times, you couldn't finish the job. DTS doesn't know this, so you get called anyway. Sometimes a Deployment was extended by changing disasters and sometimes the Waiver was extended 1-2 years. Since the advent of DTS, I've seen the decline of knowledge and quality, due, mainly, to the Cadre not being able to attract "retired professionals"--we now have part-time Government employees. Over the 19 years, I've been Deployed, along with my wife, to over 20 States (many, more than once) to work on more Disasters than I can remember. I was fortunate to have my wife come along--since I was retired, my family was grown-up, and we could afford it. It was like having continuous vacations--BUT THE HOUSE AND YARD DID SUFFER! We met lots of people (including residents) -- many became friends, and a few didn't. We already miss FEMA, but the loss of my eyesight causes me to retire. We did get a couple of extra benefits from my second career--MVP status from Alaska Air and Lifetime Titanium status from Marriott.

Ivan James writes: I don't remember when I last updated so the August 2019 Newsletter reminded me to do so. First, I apologize to my friends, colleagues and conveners of last year's reunion for not being there. I had a long-scheduled archery moose hunt in northern Alberta and had to be in Edmonton on the Saturday of the reunion, so it didn't work out. We plan to be there for the next one in Arizona. This past spring, we took our fifth European river cruise, this time from Budapest, up the Danube, across the Main Canal, down the Main River and down the Rhine to Amsterdam. Budapest and Vienna are quite beautiful, though Vienna is a bit formal for our tastes. Sara and I keep busy with our various activities, but not so much that we can't enjoy a leisurely breakfast and read the paper in the morning. Sara is involved with several organizations, antiques and her church organist job. I am still active as the legislative liaison for the Colorado Chapter of Backcountry Hunters and Anglers as well as on their Executive Leadership Team. I make a half dozen or so trips to Kansas each year to work on my farm there. This year I am putting in 10 acres of monarch butterfly habitat which will also be good habitat for quail and other wildlife. I am currently reading two books which I would recommend to anyone with these interests. One is "Down the Great Unknown" by Edward Dolnick about Powell's 1869 journey down the Green and Colorado Rivers. The other is "D-Day" by Stephen Ambrose. I picked up these books to read without even particularly thinking that this is the 150th anniversary of Powell's trip and the 75th anniversary of D-Day, so both are very apropos for this year. Both also try to give the reader a sense of what it was like for the participants. Many thanks to all those who keep the USGS Retirees organization going and keep us informed of what others are doing. Regards

Ben Jones writes: May and I have always thought we both should pay dues, because we both are WRD retirees, but apparently that is not the case. We're both doing relatively well for late-stage octogenarians. Regards

Irwin Kantrowitz writes: It's been several years since I've written, and I'll try to briefly summarize my status. I retired in 1955 and have enjoyed every minute since. Two semi-recent life-changing events were: 1) my survival of a "Widow-Maker" heart event (and subsequent bypass surgery) and 2) my "second" retirement from volunteer activities when I reached 80 (almost 2 years ago). My recovery, although slow, has been complete; my latest total cholesterol was 104, my weight is back to what it was when I was 40 and I bicycle 100 miles per week. Although enjoyable and fulfilling, keeping to a rigorous volunteer schedule was restrictive and I was on a guilt trip whenever I was away from Tallahassee. After cutting the cord, Elaine and I bought a beach house on St. George Island, less than 2 hours from Tallahassee. We spend most of our time at the beach (non-summer months are the best) and we keep the Tallahassee house for a place to stay when we have medical appointments and when the kids descend upon us. Between us, we have 5 children, 17 grandchildren and 13 great grandchildren. None are local so it seems we make one trip per month for an annual visitation, so they don't forget us. The house at the beach has only one guest bedroom so that keeps much of the family away, but USGS retirees are welcome!

Carl Kroll writes: Yes, I plan to be around for a while yet (references his dues payment) – my Dad made it to age 107. Sorry for the delay in payment. Consider the excess as a late fee. Linda and I are still enjoying retirement – even after over a quarter century of it. We regularly visit other family members in Washington, Colorado and California. Also, have toured Alaska and other western states. Rural area are our favorites, and the East Coast is still on our list. Wishing everyone well.

Stan Leake writes: Since retiring from the USGS, I continue occasional work through an emeritus position in the Arizona Water Science Center. I also consult occasionally. My wife, Lydia, passed in 2016 after a 9-year illness. I have since married Maria Elena and I am now immersed in Mexican culture. In early 2015, my kidneys failed, and I have been on dialysis since then. Nonetheless, I am able to enjoy activities including weekend trips, collecting desert plants, playing odd musical instruments and neighborhood trips in my 1929 Chevrolet.

Pat Tucci and Zelda Bailey write: It's been a busy spring and summer for us. In late April, we went with Pat's family to Italy (Sorrento area) for 2 weeks. In July, Zelda and fellow retiree, Janice Ward, went to France for 2 weeks. We also did shorter trips to Colorado and Oregon to visit friends and family. We have a good-sized garden at our house in Sedona, and it's been very productive. Zelda's been busy making pickles, freezing veggies, and making jams. Pat's been active playing guitar at a couple of open-mike nights at some local bars, and that's been a lot of fun and an opportunity to make new friends. We are enjoying our new life in Sedona, although it has been a long, hot and dry summer this year, and we're ready for cooler temperatures and opportunities to hike. Our mineral business is continuing, and it's been doing okay, considering that we've had to start over and develop new customers here.

Lamar Sanders writes: Thanks for the newsletter. Here is an update on me. I retired from the USGS in 2004 after 44 years of service, then worked with the SC Department of Transportation 5 years and then a private company 7 years designing bridge openings until completely burned out. With the USGS, I did stream gaging, gage construction, indirect, measured streams, FEMA flood studies, statistical studies, maintained Watstore programs in Reston, was Surface Water Specialist in SC from 1984, tried to invent a lot of computer programs for the Survey, etc. I have 2 daughters, one son, and 4 grand kids. The two daughters married good old South Carolinians who would never take your daughter to California or New Jersey, so live nearby, come over for supper around the table, and the grand kids to run and scream in the living room! Wonderful! I worked in Georgia, Reston, and South Carolina. I have had 2 hip replacements, double by-pass surgery, and one stent, and am doing good. If you ever feel bad, just get stent, and don't bother with medicine! Also, titanium is your friend! I am trying to use up all my body parts before I die and may leave my body to a re-cycle center instead of science when I do die. A friend asked me if they were going to put pig vessels in my heart, and I said that pig vessels would probably graft better to all that barbecue pork fat in my heart. I am now 78 years old but am still doing the martial art of Aikido after 45 years of study. (Aikido is what Steven Segal did before he got fat.) I can't roll any more, but can still throw and do arm locks, so I can still dish it out, but can't take it anymore. My daughter Michelle has studied with me for 22 years. She looks like her mama and throws like her daddy. I still

deer, squirrel, and dove hunt in the national forest by myself with map and compass. The problem with deer hunting is that when you shoot a deer, it ruins your whole hunt. I killed a big buck 2 years ago and dragged him 700 feet through the brush and downed trees, and had a hard time getting him into my van. After the bypass surgery, I dragged a big one 900 feet, but had to cut him in half to get him in my van, he was so heavy. However, when turkey hunting last year, I could hardly make it up a hill with just my gun and pack and had to go get the stent. In two years, when I am 80, I may get a walker with wheels and a seat, and put a gun rack on it, and a rope to drag the deer, so I can keep on hunting! Once or twice a year, I have a 10-mile hike with family and friends along the trail my great granddaddies walked, when walking home to South Georgia from the surrender of the Confederate Army at Appomattox. 155 left South Georgia, 75 died, and 13 made it to Appomattox. Once a year, I have a camping trip for me and several of my old Georgia and SC stream gaging buddies, to charcoal steaks, maybe skeet shoot, and tell our old stories about measuring rivers night and day, building gages, shooting dynamite, canoeing over water falls and by cotton mouths, hunting deer and quail, etc. Once, Tim Hale said "OK, I will come, but promise not to retell those old stories." I said, "No, that is the whole purpose of the camping, to retell the old stories. We just have to invite somebody who hasn't heard them yet!" The trips started out in the 1980's camping out on my family farm down in South Georgia to shoot quail, but the quail have become extinct because of farming practices, so just changed to camping trips. Some years ago, I became addicted to programming with R, a free, but complex and aggravating statistical package, and wrote some programs not adopted by the USGS. For many years, I have thought about a new envelope curve method of flood frequency computation, and almost have my nerve up to present it, if I can find anybody to look at it. Other than that, I am suffering from a health problem that will probably kill me one day - I think I am getting an early case of rigor mortis, I am so stiff. When my arms cross on my chest, I will be dead! It is either that, or I am stiff from the heredity of all my grandfather's having their hands on the plow behind the mules all those decades in Georgia.

Stan Sauer writes: Hello from Texas! Hope all is well with the retirees' group in Reston. One of these days I am going to make a trip to Reston to visit with the retirees living there. What is the date for your monthly meetings? The reason for this email is to request a printed copy of the Retirees Directory. My 2016 copy is getting rather out of date. I will appreciate very much receiving a copy and promise to keep it updated! Best regards,

Raymond Slade, Jr writes: I have been teaching a college class on *hydrologic data collection and analyses* since retiring 16 years ago. I love teaching and most of the students are older working folks, so I don't hear the excuse "my dog ate my homework". For you current USGS scientists: you aren't allowed to use the words "climate change" so substitute its Spanish translation of "cambio climatico". The current administration won't be smart enough to catch this or even understand the irony.

Dues Received since last May Newsletter:

Dave Anderson
Judy Boohar
Patricia Clark
Kent Crawford
Dave Erdmann
Tom Higgins
Ben Jones
Briant Kimball
Carl Kroll
Lamar Sanders
Janet Thomas

MEMORIALS



William P. Banks, 68, passed away on June 23, 2019, in Reno, NV. Bill was born in New York on July 17, 1950. Bill graduated from Florida International University with an MBA, with emphasis in Finance. Bill married his wife, Jerry, on June 27, 1987. Bill worked for 15 years for the US Army at the Rock Island Arsenal, Rock Island, IL as a Quality Assurance Inspection Officer. He then worked as a munition's manager for the Marines in the DC area. Later he transferred to the Nevada Water Science Center in Carson City working there for over 10-years as the Budget Analyst, DOE Program Analyst and then as the Center's Administrative Officer. Later he transferred into to the now defunct Branch of Management Services working for both the Western Region in Sacramento and the Eastern Region in Reston. Despite his many efforts to avoid moving back to DC, he ended his government career in DC as the AO for the Health and Human Services' Office of the Inspector General. Bill was especially skilled at working through difficult programmatic and financial issues across governmental bureaucratic lines throughout his career. A memorial service was held for Bill in Reno, NV, on June 28, 2019. Bill is survived by his wife, Jerry.



C. Robert "Bob" Burchett, 80, passed away on Monday, July 1, 2019, at his home in Austin, TX. He was born on June 25, 1939, in Marion, VA., to Wiley and Laura (Dishner) Burchett. Bob grew up in Marion, VA and graduated from Marion High School in 1957. Following high school, he continued his education and he received a degree in Geology from East Tennessee State University in Johnson City. Bob began his career with the USGS in the Marion Virginia Subdistrict office as an Engineering Technician, he worked in the Tennessee District office in Nashville as a Hydrologist before moving to Texas to become the San Antonio Subdistrict Chief. From there he moved on to

Oklahoma to become the Oklahoma District Chief and then back to Texas to become the Texas District Chief in Austin, TX. His last two positions, before retiring in 1999, were on the WRD Central Region staff, first as Area Chief for the Southwest Area and finally as the Central Region Program Officer. Bob was a very effective District manager and was known for being instrumental in greatly expanding USGS science programs with the Department of Defense. Bob's effective leadership and enthusiasm continued after retirement with the USGS Retirees Organization. Bob married Elizabeth "Libby" McCarty in 1961 in Marion, VA, and they were happily married for 53 years. Bob was preceded in death by his wife, Libby in March of 2014. He is survived by two daughters, twelve grandchildren, and four great-grandchildren. A Celebration of Life Memorial Walk was held in Austin, TX on August 30, 2019, at the Pfluger Pedestrian Bridge on W. Riverside Drive. Following the walk a brunch was held at his daughter's house. A second Celebration of Life was held at Hungry Mother State Park in Marion, VA, on October 26, 2019. One of Bob's colleagues, **Ed Martin**, writes: "Bob was the perfect role model for a WRD District Chief in the 1980's and 1990's. I first got to know Bob when I was the Louisiana District Chief and the Louisiana District was moved to the Central Region and Bob became my area chief. Bob led by example and had been very aggressive at program development and expected the District Chiefs in his area to be the same. I don't recall ever discussing a problem with Bob with which he did not have some firsthand experience. At this point in Bob's career Libby was able to travel with him; my wife and I had several enjoyable meals with Bob and Libby when he traveled to Baton Rouge, LA. I remember Bob always insisted that I choose the restaurant, his only requirement was that it must serve authentic South Louisiana seafood."

Pete Anttila writes of Bob's service to the Retirees' Organization: "He actively served 6 years as the Regional Director for the Central Region (CR) where he maintained effective contact with the CR State Contacts, was instrumental in decisions made by the Organization, and always met his duties for requested information and actions. He was instrumental in maintaining and being an active participant in the monthly meetings of Retirees in Austin, TX. He was a willing and valuable member on the Local Arrangements Committees (LAC) for Reunions in San Antonio and Nashville. Without Bob's effective recruitment, the Nashville LAC would not have been formed. His passing truly is a loss to the Retirees Organization and to many of us as a good friend."

Another of Bob's colleagues, **Ken Lindskov** shares: "Bob and Libby were always welcoming to everyone. From a balloon festival in Albuquerque, to my retirement party, to all the Retirees' Reunions, Bob and Libby were always so much fun making everyone feel included and part of the group. In addition, Bob was a great help to me and the South Dakota District Program."

-Ed Martin, Southeast Regional Retirees' Representative



Joy Ann Geiselman, 67, passed away at home in Anchorage, AK, on May 16, 2019, after a 15-year-battle with cancer. Joy was born on March 30, 1952, in Elmhurst, IL, to Roy and Esther Geiselman. She grew up in Springfield, Ill., graduating from Springfield High in 1970. She earned a Bachelor of Arts in biology from Carleton College in Northfield, MN., in 1974, and a Ph.D. in biological oceanography from MIT/Woods Hole Oceanographic Institute in 1980. While completing her doctorate, she met her future husband Peter Johnson. They wed in Woods Hole, MA., in 1981, before moving to Anchorage, where Joy began a long career with the Department of Interior. At the time of her retirement in 2012, she served as Deputy Chief of Biological Sciences at the USGS Alaska Science Center. Joy's passions in life were family, her gardens and the natural environment. A devoted mother to her sons

Matthew and Patrick, she passed on her love of nature to both. Her sons were accomplished Nordic skiers. Joy loved cheering at their races. She is also fondly remembered by two exchange students she hosted, Fredrik and Simone. With inspiration from Joy, both pursued science careers. Joy's talent and love for gardening was reflected in the beautiful flowers and bountiful vegetables she grew. Joy cherished time with her sister Mary as the duo spent hundreds of happy hours gardening together. Joy was inspirational during her long battle with cancer as she maintained a positive outlook and devoted her energy to friends and family. She contributed significantly to cancer research by participating in clinical trials for three therapies which gained approval from the FDA for cancer treatment. Joy is preceded in death by her parents; and two brothers. She is survived by her husband, Peter Johnson, two sons, a brother and sister. A Celebration of Life was held on May 28, 2019, at the Hilltop Ski Area Chalet.



Johnna Lee (Sheehy) Higgins, 47, passed on July 29, 2019. It is with great sorrow that the Washington Water Science Center (WAWSC) announces the Johnna's passing after losing a battle with cancer. Johnna was an employee with the WAWSC for the past 29 years. She started as a Student Trainee for the General Hydrology Section in 1990 while attending college. In 1996, Johnna obtained her bachelor's degree in Geology from Central Washington University. In 1997, Johnna transferred from the Hydrology Section of the Studies Program to the Data Program, becoming a streamgager in the Tacoma Field Office (now called the

Western Washington Field Office) managing her own network of streamgages. Johnna quickly learned ADAPS and water quality sampling and was soon leading sediment sampling activities for the field office. One significant effort she worked on was a turbidity and suspended sediment monitoring project on the Elwha River, developing a sediment data set before two dams were removed. Johnna also conducted a project to determine upstream boundary points on southeastern Washington streams as defined by the state's Shoreline Management Act. The strength of Johnna's organizational and writing skills were recognized and she was then called on to be the compiler and editor for the Center's Annual Data Reports. Soon thereafter, Johnna was appointed the WAWSC's local Database Manager. In the last few years Johnna has been serving as a critical linchpin to the Center's successful transition to the new Aquarius water records processing environment. Johnna brought a generosity of spirit to her involvement in Center social activities including planning holiday parties, hosting lunchtime cribbage games, and serving as treasurer for the Employee Remembrance Fund, keeping the fund on a solid financial footing by helping to supply the office pop machine. At Christmas time, Johnna would drop off cards with photos of her family cutting down that year's Christmas tree and always accompanied by chocolates. That simple office tradition added to our holiday season and reminded us of the great love she held for her family. Johnna loved playing softball, coaching her girls, and always helped organize, recruit, and at times captain the office team, the USGS Waterdogs, to the 2015 Semi-Finals. She was voted MVP and played in the local All-Star game at Tacoma's Rainier Field.

Johnna is survived by her husband Darin and her three children Gracie, Raya, and Clay, her mother Julie Sheehy and her five sisters. A service is being planned at St. Charles Borromeo Church in Tacoma, but no date has been announced yet. There is a large empty space in the Washington Water Science Center which was once filled by Johnna's friendly spirit. She will be sorely missed by her colleagues, family, and friends.



Undine N. LeGrand, 96, (widow of USGS retiree Harry LeGrand) passed away on May 5, 2019 in Crossville, TN. She was born in Kings Mountain, NC on May 11, 1922, and attended the University of North Carolina at Greensboro. After graduation, she was teaching at Greensboro Senior High School (now Grimsley High) when an army recruiter offered her a position in Washington, DC at Headquarters, Army Service Forces in the Pentagon. She accepted and loved living in Washington, and was married there in 1945 to Captain Harry LeGrand, who had just returned from military duty in Europe. During a marriage of 68 years, they lived in Atlanta, GA; McLean, VA, a suburb of Washington; Raleigh, NC; and Crossville, TN. Her last employment was at North Carolina State University in the Division of Student Affairs. She often accompanied Harry on his many geology travels across the United States and several foreign countries. They also enjoyed many trips with friends, especially to England. Undine was preceded in death by Harry who passed in 2013. She is survived by two sons and two grandchildren. A private graveside service was held at Raleigh Memorial Park.



Keith Long passed away on May 17, 2019 following a long illness in Fort Collins, CO. Keith grew up in the Black Hills of South Dakota. In 2000 he retired from his work as a chemist in Denver, CO and moved to live in Fort Collins. Keith was a man of many interests. He loved to fish and golf and liked to watch football. Among other hobbies, Keith loved vintage cars, card games, computer games, wood working, sailing, camping and reading. But the real love of his life was flying. Keith got his pilot's license when he was a teenager in high school. Grinnell College didn't allow cars, but Keith kept his plane at a nearby airfield. Keith leaves behind his beloved wife, Kay, his son and two daughters. There are 6 grandchildren and 2 great grandchildren. Also surviving is his sister. A celebration of his life will be held at a later date.



Douglas B. 'Doug' Manigold, 83, of Longmont, CO. died peacefully at home on July 26, 2019. He was born in El Paso, TX to Fay and Ella (Barrett) Manigold. After graduating from Ysleta High School, he was drafted into the US Army and served in Korea. After being honorably discharged he continued to serve in the US Army Reserves. He graduated from Texas Western College in 1967 and began his 33-year career with the US Geological Survey in the Hydrology Sector. He held positions in Austin, TX., Denver, CO., Reston, VA., and then returned to Longmont, CO where he retired in 1994. He was an active member of the American Chemical Society. Doug is survived by his loving wife of 51 years, Susan (Huttanus), a daughter, and two grandchildren. Doug was the eldest of eight children. He is also survived by numerous nieces and nephews. He also leaves behind his beloved pets, Jack, George, Barney and Gracie. Preceding him in death were his parents. He was a member of St Francis of Assisi Catholic Church and was active in Chapter 1313 of the Knights of Columbus. A Memorial Mass was held on July 31, 2019 at St. Francis of Assisi Catholic Church, Longmont, CO.



Louie Marincovich passed away in the Spring 2019 and was a paleontologist who specialized in studying Cenozoic marine mollusks of the North Pacific and Arctic Oceans. Lou is the only scientist fortunate enough to have focused on this topic for an entire career. During his time with the USGS and the California Academy of Sciences, he documented the changing climate of the Arctic over sixty million years as evidenced in the shifting migration of mollusk species between Asia and North America. Lou retired in 2017 from the USGS. He was the first to show that ancient lineages of mollusks considered extinct at the end-Mesozoic extinction some 65 million years ago continued to dwell for millions of years in the Arctic Ocean beside newly evolved Cenozoic species. And his fortuitous find of a fossil clam specimen in a museum collection led him to solve the mystery of Bering Strait's age. Lou had authored more than 100 scientific articles and books. As a child, he was inspired to become a paleontologist by a children's book on fossils, and he hopes to pass along this lifelong inspiration through the pages of his new memoir "**True North: Hunting Fossils Under the Midnight Sun.**"



Nicholas 'Nick' Constantinos Matalas, 88, of Vienna, VA passed away on August 16, 2019 from pneumonia caused by complications of Parkinson's disease. Born in the small town of Vandalia, IL, as the only son of his Greek immigrant parents, Nick was motivated at a young age to excel and seek knowledge. As a teenager, he ran a popcorn stand outside the town's only theater and became a voracious newspaper reader. He followed the war closely and developed an intense interest in World War I. After attending a Major League Baseball game with his father in St. Louis, he fell in love with the game and eventually became a life-long Yankees fan. By the time he graduated from high school, his popcorn stand paid off. He had saved the \$5,000 necessary for him to attend North Carolina State College. Upon graduating with his B.S. in civil engineering, he went to work for the U.S. Geological Survey in Raleigh, NC. and continued his studies at NC State. With his M.S. in sanitary engineering, he

left North Carolina to pursue a doctorate at Harvard University. Immediately after receiving his Ph.D. in civil engineering from Harvard, he married his love, Stella, and they moved to northern Virginia. Nick continued his career with the U.S. Geological Survey where he received numerous honors and commendations over the years for his research papers, presentations and thought leadership on stochastic hydrology. To Nick, his work was a passion. He enjoyed the research and was active in his professional community, serving as a visiting professor and sitting on Ph.D. dissertation committees for several universities, including the University of Arizona, Harvard University, Tufts University and the University of Virginia. After retiring in 1995, he continued to consult and collaborate with esteemed colleagues and friends. Nick was a voracious reader and filled his library with books on hydrology, statistical analysis and World War I history. He also traveled the world extensively for both business and pleasure. His legacy study on the world's saltwater islands provided an opportunity to take Stella with him to Hawaii and other islands. After his retirement, Nick and Stella travelled near and far. Domestically, they enjoyed visiting historic sites, touring national parks and attending Yankees Spring Training games in Florida. When travel took them abroad, they relished trips to Greece and other parts of Europe. His in-depth knowledge of world geography, demographics and cultural norms became a source of fascination for his wife and daughters. Peppered with random questions on facts and figures, he would always modestly reply that he was not an expert. When pushed for a guess, he was almost always within striking distance. Jeopardy was a nightly ritual that became a family favorite event.

He leaves his wife of 61 years, Stella. His love and devotion to her was unmatched. He was also the beloved father of two daughters. He is also survived by four nephews and one niece. He was preceded in death by his parents, Constantinos and Mary Matalas. Nick will be dearly missed and fondly remembered as a loving and devoted husband, father, brother, uncle, friend and colleague.



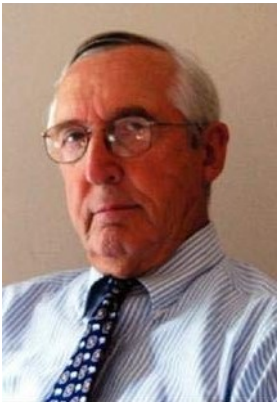
Paul E. Meadows, 75, passed away on October 1, 2019. Paul was born on January 24, 1944 in Beckley, WV to Rufus D. Meadows and Naomi Ama Foley. He graduated from Williston High School in 1961 then went on to graduate from Central Florida Junior College. Paul married Kathryn Miller in Crab Orchard, WV on April 9, 1965. Upon graduation Paul went to work for USGS for thirty-seven years retiring in 2001. Paul served in the Army Reserves from January 25, 1967 until March 6, 1972 as a Sergeant in the Military Police. Paul didn't stay retired long, before he started working on a farm in Williston for his brother-in-law. Paul then started working on Dixie Plantation in Monticello for twelve years. He then pursued a career with Fish and Wildlife until Paul decided to spend some time at

home with his wife. In his free time, Paul loved to hunt deer and turkey, work in the yard, cheer on the Florida Gators in all sports, and attend church. Paul adored his wife, children and grandchildren. Paul never met a stranger and loved to make others smile through jokes and stories. Paul and Kathy had two children, (a daughter and a son), he was blessed with eight grandchildren, and he was even further blessed with three great-grandchildren. His parents Rufus and Ama, and five sisters and a brother predeceased him. A Celebration of Life service was held on October 5, 2019 at Thomasville Road Baptist Church, Tallahassee, FL.

Patricia Morrisette, 86, passed away on October 6, 2019 after fighting the good fight. Pat was born on March 24, 1933 in Bedford, IN to Carl and Florence Stapp. On August 7, 1953 she married James E. Morrisette. They

raised three children, two sons and a daughter. Pat loved adventure, flowers, laughter and tea parties, but mostly she enjoyed spending time with her family and friends (and she had a lot). Pat was preceded in death by her parents, her two sisters and a brother. She is survived by her husband Jim, her children, a brother, grandchildren and great grandchildren, and numerous nieces and nephews. A funeral service was held on October 12, 2019 at Rockland Community Church, Golden, CO. She will be dearly missed.

James R. 'Jim' Mullen, 80, a longtime Weed, CA resident passed away on May 6, 2019. Born in Sacramento, CA in 1939, he graduated from UC Berkeley with a degree in mechanical engineering and after a short stint at Aerojet spent the remainder of his working life at the US Geological Survey retiring in 1997. Jim lived in Tahoe City for many years and moved to Weed when he retired. He was an avid outdoorsman, and enjoyed fishing, hiking and camping throughout the region. He participated for many years in the choir at the College of the Siskiyous and in later years volunteered at the Mt. Shasta Sisson Museum and was a member of the SIRs club (Sons in Retirement). He is survived by his wife, Eleanor; two sons and a daughter; and a grandson. Memorial services were held on August 10, 2019 at the Lower Lodge Mt. Shasta City Park, Mount Shasta, CA.



Richard ("Dick") William Paulson (82) passed away at his home in Kitty Hawk, NC on July 29, 2019. Dick was born in Queens, NY to Howard J. Paulson and Louise (Eisner) Paulson on April 6, 1937. After graduating from high school in 1955, he enlisted in the U.S. Army for three years and served in the 101st Airborne Division at Fort Campbell, KY after basic training at Fort Bragg, North Carolina. After his military service, Dick attended Hofstra University and received his B.S. degree in geology in 1962. That same year he married his wife Marion at the Grace Lutheran Church where they had met as teenagers. He spent the next three years engaged in postgraduate studies in physical oceanography at MIT. In June 1966, Dick was hired by Norman Beamer, Chief of the Branch of Water Quality in Philadelphia, PA to work in the Delaware River basin. At the time, the office operated a network of water-quality monitors to track the movement of the saltwater front in the estuary below Trenton, NJ, towards the water-supply intakes of Philadelphia. This information was critical to the management of

regional water supplies and for the ordering of freshwater releases from New York reservoirs in the headwaters of the basin by the Delaware River Master (a USGS employee). Dick's early work in the office included evaluating the use of the proposed Earth Resources Technology Satellite (ERTS) imagery and data-relay capability to assist in the management of the basin's water resources. In 1968, Dick and Marion moved to Harrisburg, PA, where he led a Special Projects Section to implement the use of satellites to relay data from gaging stations in the Delaware River basin after the launch of the ERTS-1 satellite on July 23, 1972. This work was very successful and helped encourage NASA to continue developing data-relay technology on the GOES series of satellites. Dick transferred to the Reston, VA, office in 1974 to assist in coordinating programs of the Hydrologic Instrumentation Facility (HIF) and the Satellite Data Relay project under the Assistant Chief Hydrologist for Operations, Tom Buchanan. In 1979, Buchanan appointed Dick as Chief of the Instrumentation Group. In 1981, Dick joined Chief Hydrologist Phil Cohen and others on an exchange visit to the People's Republic of China that led to a 1985 seminar on flood hydrology held in Nanjing, China. In 1987, Dick became Chief of the Branch of National Water Summary, a position which he held until his retirement from the USGS in 1993. He was awarded both the Meritorious Service and Distinguished Service honor awards of the Department of the Interior in recognition of his accomplishments. In the fall of 1993, Dick embarked on a remarkable second career in international hydrology. Most of his work, under contract with NOAA and funded by USAID, sought to mitigate water-resources and flood-management problems in the rivers of developing countries. He retired in 1993 from the USGS. These included: Araks and Kura Rivers in South Caucasus; Lower Mekong River Basin in Southeast Asia; Ganges, Brahmaputra, and Meghna Rivers in South Asia; Aral Sea Basin in Central Asia; and the Nile and Zambezi Rivers in Africa. These projects used real-time hydrologic instrumentation networks to support flood forecasting and warning systems. His work required him to travel extensively, which Dick greatly enjoyed. "Of all the places I've worked," he wrote in 2008: "the MRC [Mekong River Commission] countries are my favorite – I've made many friends, participated in interesting projects, enjoyed excellent food, learned about other cultures, and have come to feel at home." In January 2009, he and Marion went on a Smithsonian tour to visit many of the places where he had worked in Southeast Asia. Later in 2009, Dick self-published a memoir entitled *Consulting Chronicles and Patan Moments* that describes many of his adventures and insights into water problems in developing countries. Special moments

included a memorable dinner with friends above historical Durbar Square in Patan, Nepal. The book was dedicated to his grandchildren. The Paulsons had a family tradition of gathering each summer for two weeks at Duck, NC, on the Outer Banks. They gathered there annually for 17 years. As their children became adults and their grandchildren grew up, synchronizing vacation schedules became difficult. In September 2013 the Paulsons decided to relocate permanently from their home St. Michaels, MD to Kitty Hawk, NC. There the rest of their family and friends could visit as their schedules permitted. Dick and Marion enjoyed trips to Europe, Canada, and Maine. He loved the ocean and the beach of the Outer Banks. Consulting trips became less frequent. In 2016 Dick developed a rare blood cancer, MDS (Myelodysplastic syndrome). The disease took its toll, and he received hospice care at his home. He passed away surrounded by his wife and family. He was a loving and caring husband, father, and grandfather. He is survived by his wife Marion; children Pamela Paulson Bottinelli, Karen Paulson, and Ross Paulson; and seven grandchildren. I was fortunate to know Dick throughout his career from his time in Philadelphia to his work on the *National Water Summary* at headquarters. After his retirement, we shared several "reunion" dinners in Dupont Circle, Washington, D.C. with Edith Chase, who played an important part of the design of the *Summary*. Dick instilled a sense of honesty, integrity, and competence in all whom he met. His calm demeanor and his focus on what needed to be done were reassuring to our staff. Over the six years that he led the *National Water Summary* program, he assembled a closely-knit and highly motivated team of professionals who strongly believed in the importance of their work. All this was the foundation of his very successful and long career in international hydrology. As one colleague expressed it: "He was one of the most kind, gentle, and nice people that I have met in my career... I will miss him." All who knew him will miss Dick Paulson.

-Dave Moody, Retired in 1994

Charles L. Rice, 89, formerly of Elon, NC passed away August 19, 2017 in Midlothian, VA. He had moved there in June and died after a short illness. He retired in 1997 from the USGS. He is survived by his wife, Lois; daughter, Laura; and son, Curt. He missed the friends he made in North Carolina and regretted that he did not have the time to say a proper farewell.

Anne Stewart: I am sad to announce that, on July 8, 2019, the New Mexico WSC lost one of our most talented and dedicated retired colleagues and an all-around lovely human being to cancer. Anne received her M.S. in Environmental Studies and B.A. in Environmental Geology from the University of Montana. Prior to starting her PhD, Anne worked in private consulting with D. B. Stephens and Maxim Technologies in New Mexico. She began work with the USGS at the AZ WSC in 2006 while in the graduate program in Hydrology and Water Resources at the University of Arizona. In addition to her dissertation, (Estimation of urban-enhanced infiltration and groundwater recharge, Sierra Vista subbasin, southeast Arizona USA, 2014), Anne worked on projects estimating runoff in semiarid regions. Anne started as a hydrologist with the NM WSC in June of 2010 while finishing her PhD. She distinguished herself as a dedicated hydrologist who loved all aspects of hydrology and paid extraordinary attention to detail. She was at her most enthusiastic when tackling a tricky hydrologic question. While at the NM WSC, Anne was an author or coauthor on 7 studies. She worked on a series of projects to characterize water resources in San Miguel County which culminated in a numerical model of the regional hydrogeology. The model shed light on the water-quality implications of the historical disposal of coal combustion byproducts. She also contributed to a project to assess the water resources and potential effects on the water resources from oil and gas development in southern New Mexico. Anne will be remembered for her great sense of humor, positive outlook, and passion for hydrology. She was always wanting to get more done than was possible by one human being. She loved her family. It shone through every time she talked about them, doting on her son and his family, her dad, and her sister. Anne was a staunch carnivore. She used to joke that it always surprised her that most people coo'ed and aww'd when confronted with cute bunny pictures, when all she could think was "Yum". Anne was a dedicated and fearless scientist. During her dissertation work, she would dive into the knottiest and most buried coding problems to make sure she understood what was being done, sometimes uncovering mistakes or bringing clarity to misunderstood algorithms. She was also a dedicated field hydrologist, working during the hottest days of the southeast Arizona summer and storm chasing to make sure she didn't miss the opportunity to get a direct measurement of an ephemeral flow event. We miss her already. True to her character, Anne did not want a fuss made about her, and did not want a service. Cards can be mailed to her family at: Family of Anne Stewart, 10425 Constitution NE, Albuquerque, NM 87112 *Many thanks to Anne Tillery and Gretchen Oelsner with the NM WSC and James Callegary with the AZ WSC for composing this tribute to Anne and her life.*

-Johnathan Bumgarner, P.G., Director, New Mexico Water Science Center



Greg Stratton, age 70, passed away as a result of lung cancer on August 13, 2019. Greg worked in the USGS Minnesota District Office from 1980 until he retired in 2008. Greg was a hydrologic technician conducting field trips and preparing surface-water records in his earlier years. Later in his career, he oversaw the processing and publishing of water-quality data for the annual report. Greg is remembered by colleagues and friends as kind, helpful, a stickler for detail, and having a great sense of humor. His attentiveness for detail showed in all his work and in that manner, he made sure that supplies for field work were well stocked and available. Greg was stationed in Korea and

Germany while serving in the Army in the late 60's and early 70's. He loved the outdoors and was no stranger to the BWCA (Boundary Waters Canoe Area). He loved family outings, music, and the writings of outdoorsman, Sigurd Olson. Greg is survived by wife Jane, son Jeremy, daughters Emily and Amanda, and four grandchildren. He was preceded in death by his parents and sister Melissa. A memorial was held on Sunday, September 15 2019, and included a church service afterwards. In lieu of flowers, the family requested donations to the American Cancer Society.



Craig Christopher Thompson, 42, passed away suddenly and unexpectedly September 20, 2019. Craig was a Hydrologic Technician with the USGS Caribbean-Florida Water Science Center for 18 years and called the Fort Myers Field office home. Craig received his BA of Environmental Studies from Florida Gulf Coast University in 2000. Shortly after graduation, he accepted a position with USGS Fort Myers office. Craig spent most of his early career fending off swarms of mosquitoes installing and servicing Greater Everglades Priority Ecosystem Science stations on the southwest coast of the Florida Everglades. Later, he transitioned to a project that examined water quality and flows of tributaries to the Caloosahatchee River and Estuary. In the most recent years, Craig maintained a series of index-velocity and stage discharge gages in Lee County and around Lake Okeechobee. Craig also

served as the Fort Myers Field office Safety Officer. His 'good choice/bad choice' photo emails kept everyone in stitches and while always achieving the safety lesson with staff. Craig was known for his absolute devotion to the love of his life, Jaimee. Craig was also an adoring father to their young twins Jude and Eislee. At work, he was the easy-going office food expert that was more than happy to help anyone in need. His lighthearted genial nature and sarcastic humor are what everyone loved about Craig. The daily quips from favorite movies and voice impressions could lighten anyone's mood. Craig was also one of the people that always met you at the office door with a smile on his face. Craig is survived by his wife Jaimee and their twins, his sister, his parents Tink and Chuck, along with a large and loving extended family. A service was held September 28, 2019 at City Gate Ministries, Fort Myers, FL.



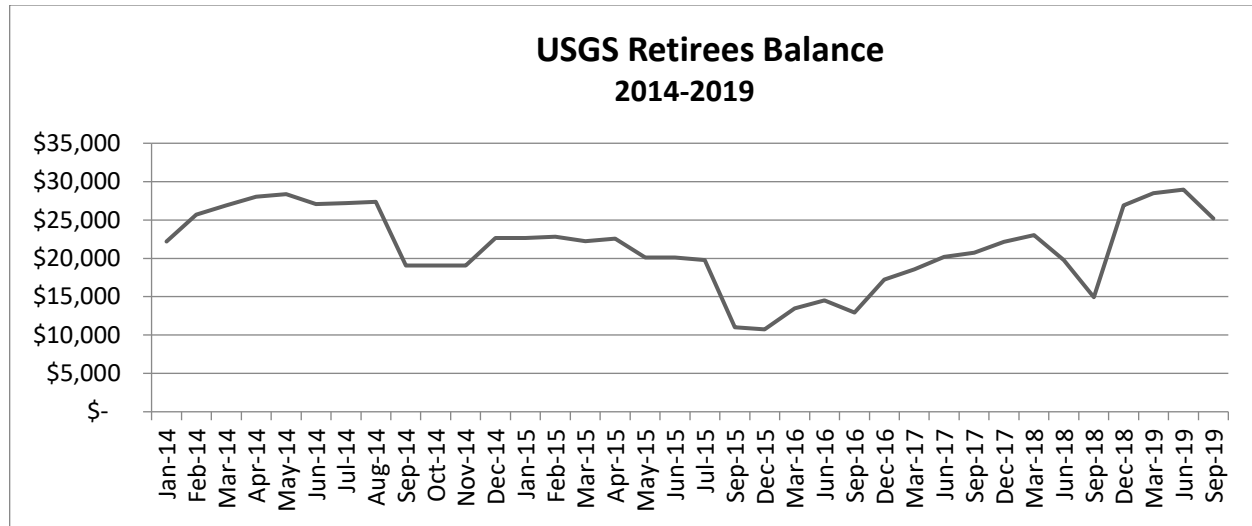
Rod Williams, 89, died unexpectedly at home on June 1, 2019. He was born January 30, 1930 in Juneau, AK. His childhood was filled with fishing, boating, hunting, sports, and hiking, culminating in him becoming valedictorian of his high school. After graduating from the University of Washington in Seattle in 1952, his sister, Marge, introduced him to her college roommate, Annette Watt. Rod and Annette soon fell in love and were married in 1954. Thereafter, they lived a happy life together for the next 64 years. Rod spent the vast majority of his career working for the US Geological Survey, WRD in Tacoma, WA. During his 30-year career with the USGS, Rod's assignments included a vast variety of duties including streamgaging, flood studies, snowpack measurements, and testifying in court regarding water-rights issues, just to name a few. Rod was a warm, bright, kind-

hearted, steady, involved father and husband; a true "family man". He was preceded in death by his wife, Annette, in March 2019. He is survived by his sister Marge, three children; Jeff, Kathy and Carol, and by seven grandchildren (Ryan, Erica, Colin, Austin, Laura, Claire and Joel). Rod was a loving and patient caregiver to Annette in her final years. He enjoyed monthly bridge club, crossword puzzles, gardening, photography, and swapping stories with friends and family over meals. He could often be found walking the trails at Point Defiance Park

TREASURER'S REPORT, THIRD QUARTER 2019

Treasurer Cathy Hill reports the organization had \$25,175 at the end of the third quarter, September 30, 2019. Expenses this quarter included \$4,000 in scholarships awarded and the printing of the August Newsletter.

Special thanks for contributions above dues to: Jack and Maria Fischer, and Dannie and Cheri Collins. Many thanks for your generosity.



RETIREMENTS

Richard B. 'Rich' Alexander retired on September 30, 2019 after 39 years of service with the USGS in Reston, VA. He began his career with the Branch of Systems Analysis in 1980 while completing a MS at the University of Arizona (Dept. of Hydrology). He joined the National Water Quality Assessment (NAWQA) Program in 1996 as part of the SPARROW Modeling Group and Hydrologic Systems Team, where he worked until a recent transition to the Integrated Modeling and Prediction Division of the WMA. Rich was active for more than 10 years during the late 90's and 2000s in research on nutrient transport in the Mississippi River Basin related to seasonal hypoxia in the Gulf of Mexico, including activities for developing research and management action plans in the Basin. Rich became a Research Hydrologist (RGE) in 2002 and obtained a PhD in 2015 from the Pennsylvania State University. His recent research has focused on Bayesian applications of the SPARROW model, work that led to the development of an open-source R version of SPARROW. In retirement, Rich plans to continue working with colleagues as a USGS volunteer and will spend time traveling and pursuing other interests.



Steve Berris, Nevada WSC Data Chief, retired on September 28, 2019 after more than 35 years in Federal service! Steve tried his best to slip out quietly, but WHOA....this must be announced! A little background - Steve holds a BS in Watershed Science, 1982, from Colorado State University, and an MS in Forest Engineering (Hydrology emphasis), 1985, from Oregon State University. For his graduate work, Steve collected snowmelt and microclimate data during rainfall events in old growth forests in the Pacific Northwest, and recently divulged that... *'This field experience was rather miserable, but also was great conditioning for my future USGS fieldwork!'* Steve has contributed greatly to two Water Science Centers, Washington

and Nevada. Fresh from OSU, Steve began his USGS career in 1985 at the Tacoma Field Office but soon transferred to the Surface-Water Project Section. After learning the ropes of precipitation-runoff models for the Olympia, Washington area, Steve transferred from the land of rain to the land of sunshine and joined the Nevada WSC [District] in 1992. Steve often explains to many of his peers back east that... *'We actually do have rain and rivers in northern NV, and I really enjoyed applying my WA modeling experience to develop routing and operations models for these NV watersheds. My first model in NV was for the Truckee River Basin and I'm proud of that one. It was a good piece of work.'* After almost 12 years of developing runoff-generation and river operations models in WA and NV, Steve accepted the position of Field Office Chief for northern NV in 1999. In a recent bio-interview with his supervisor, Steve gave his reasoning... *'I strongly felt that better data used for model input, calibration, and verification, made for better models. So, when the Truckee River Project ended in 1999, I made the move and am so glad I did - I loved the position. It's always been an honor to work with and mentor passionate hydrographers, and to have them mentor me right back!'* Sticking with data, Steve moved to the Nevada WSC Data Chief position in 2010 bringing along his passion to continually improve the quality of data collected. Again, Steve explains his reasoning.... *'I wanted to be the person receiving cooperator and stakeholder feedback - be it compliments or complaints. I liked the interaction because I believe that our customers receive what they pay for - the value of high-quality USGS hydrologic data (and the database) is worth the cost and is in fact good value.'* What lies ahead? *'I'm just a domestic, family guy who enjoys sensing all sights, sounds, and smells of nature, a good laugh, and hearty, often nonsensical conversation with anybody who can put up with me. I hope to continue to learn from others - although I already know that my family is always right - and to be pleasurable to those around me. My retirement right now is an open book with time to experience new things, be it hiking new trails in the beautiful Sierras, enjoying a refreshing drink, or just simply doing nothing at all. I may even find time to write a book I've always wanted to write, "Napping in Nature."*

Kathleen (Kathy) Fowler retired after more than 39 years of service. Kathleen received her Bachelor of Science Degree in Geology from Indiana University in 1977. Her first major work experience was in the oil fields of Texas and Louisiana as a mud logging geologist. She began her career with the USGS in 1980 as a field technician and then was converted to hydrologist. Kathleen has worked in both groundwater and surface-water hydrology. She developed GIS databases for military bases in Indiana. She applied GIS techniques to

classify hydrogeologic data for use in the groundwater flow model, MODFLOW. She led projects to compile hydrogeologic, water-quality, and sediment transport data. For Indiana's Source Water Assessment, Kathleen surveyed and described intakes at most of Indiana's surface-water suppliers. She has participated in mercury studies in litterfall, precipitation, and streams. Her recent work has involved flood inundation mapping, low-flow characteristics estimation, regional-regression analysis for low-flow estimation at ungaged sites and estimating wetland extents to locate agricultural land that could be restored to wetland status. Kathleen is an active member in the Indiana Water Resources Association (IWRA) and is a Licensed Professional Geologist. She received the 2018 Charles H. Bechert Award for career contributions to advancing understanding of Indiana water resources. Kathleen's last day will be August 31. With more time in retirement, she plans to travel with husband Bob, expand her beehives, and work more with her two mules. As scientist emeritus with USGS, Kathy will continue her current project updating Indiana flood frequency statistics and mentoring up-and-coming hydrologists.



Christopher C. 'Chris' Fuller retired on June 28, 2019, after 37 years of service to the USGS, almost entirely within the National Research Program (NRP) as a lead scientist specializing in characterizing and understanding processes affecting the fate, transport, and bioavailability of metal contaminants in response to changing hydrologic and geochemical conditions. After receiving a BS in chemistry from SUNY Oswego, NY in 1976, Chris moved to California to run the marine geochemistry research lab under the mentorship of Doug Hammond at the University of Southern California. There he received his MS in Geology in 1982. His time at USC entailed collaborative research with the USGS San Francisco Bay project. Following this exposure to the USGS, Chris joined Jim Davis' NRP project in 1982 developing the project's field research activities.

Chris conducted research at four of the Toxics Substances Hydrology Program research sites studying metal contamination from mining. His research focused on characterizing metal sorption reactions with aquifer and stream sediments through field studies and lab experiments, including novel methods and cutting-edge technologies such as synchrotron X-ray techniques. His research success benefited from strong collaborations with many outstanding NRP, WSC, university and Stanford Synchrotron Light Source scientists and resulted in over 100 publications. Highlights of Chris' research contributions include: (1) the discovery of diurnal cycles of metals in streams in response to photosynthetic-driven pH cycles, (2) quantification of the role of hyporheic exchange on attenuation of metal contaminants in streams, (3) characterization of dissolved uranium reactions with phosphate and applications to groundwater remediation, and (4) elucidation of the role of solid-phase and aqueous speciation on metal and uranium bioavailability to aquatic organisms. Chris also built and operated the Menlo Park Sediment Radioisotope Laboratory (MPSRL), a critical capability used by many NRP, NAWQA, WSC and GD projects. With the MPSRL, Chris had an integral role in many successful collaborative studies: reconstructing contaminant input histories and deposition rates in lakes, estuaries and wetlands; determining and quantifying sediment sources to estuaries and streams; and determining rates of carbon cycling in wetlands and soils in response to climate change. Chris also served as co-project lead for the Toxics Hard Rock Mining project from 2005 to 2018, and as NRP Research Advisor for Surface Water Chemistry from 2002 to 2008. Chris plans to continue his research work and service to the USGS as Emeritus Scientist. This includes mentoring scientists and transitioning the radioisotope lab so that it can be maintained for future WMA and USGS studies. In retirement, Chris plans to enjoy life with his wife and two sons, hike and camp in the western US, spend time at his extended family's house in Chatham, MA, and devote more time to photography, guitar playing, sailing, and home brewing.

Angela M. 'Angie' Hughes has retired after 34 years with the Minnesota/UMid Water Science Center. Angie started as a Clerk Trainee in 1985 with the Minnesota Water Science Center (District) when she was a Junior in High School under a Stay in School Appointment. After high school she became a full time Administrative Operations Assistant. Angie has been an integral part of the Administrative staff of the Minnesota Water Science Center and now the UMid Water Science Center and has juggled many different administrative tasks with a high-level of dedication. Angie was recognized as Civil Servant of the Year in 1997, a testament to her work ethic and can-do attitude. She also unselfishly helped out in organizing many office social events, such as summer picnics and holiday gatherings. Angie plans to come back as a re-employed annuitant to help with the transition of administrative tasks.



Perry Jones is retiring from the USGS, effective September 27, 2019. Perry began his Federal service at the U.S. Bureau of Mines Research Center in Minneapolis, Minnesota. After Congress voted to close the Bureau of Mines in 1995, Perry transitioned over to the USGS. Perry's work at the USGS included model simulations of groundwater flow in bedrock and glacial aquifers, research on groundwater/surface-water exchanges near wetlands and lakes, and nutrient/water-quality assessments in upland wetlands and other aquatic environments. Perry's background in mining issues and mining geology was also useful for several USGS studies, including ground-water flow assessments surrounding mines and water-quality assessments of watersheds in northeastern Minnesota, where mining is proposed. Throughout his career, Perry collaborate with scientists in other agencies, academia, and from across the USGS; and he strove to bring innovative, state-of-the-science tools to his research. A capstone achievement is the 2016 report [Statistical analysis of lake levels and field study of groundwater and surface-water exchanges in the northeast Twin Cities Metropolitan Area, Minnesota, 2002 through 2015](#), which was selected by the Office of

Groundwater as the best USGS groundwater report of 2016. Perry plans to continue in volunteer status for a while to wrap up a couple projects and pursue a change in career.

-John F. Walker, Director, Upper Midwest Water Science Center



Jeffrey D. 'Jeff' Martin retired from the U.S. Geological Survey on September 28, 2019 after 39.5 years of service. Jeff joined the Indiana District on April 12, 1979 as a student employee while working on his MS in Environmental Science at Indiana University, Bloomington. In his first week of student employment, Jeff was thrilled to receive a Government credit card and field vehicle for field work. After graduation, Jeff was hired as a hydrologist and worked in the Project Section studying the hydrologic effects of strip mining in southwest Indiana and the effects of combined-sewer overflows and urban runoff on water quality and dissolved-oxygen concentrations in the White River in Indianapolis. In 1987, Jeff became the Water-Quality Specialist for the Indiana District USGS and began to emphasize field-collected quality-control water samples and the management of quality-control data. In 1991, Jeff joined the NAWQA Program's White River Study Unit team and was

responsible for the design of surface-water data-collection networks and the review and interpretation of environmental and quality-control water-sample data. In 1997, Jeff joined the NAWQA Pesticide Synthesis Team and extensively prepared and reviewed data sets for the Pesticide Circular. Jeff and others wrote national QC reports on field blanks, field replicates, and field and laboratory spiked water samples for NAWQA pesticide data. Jeff and others developed a procedure for adjusting measured pesticide concentrations for temporal changes in analytical method bias which was useful for pesticide trend analysis. In the last phase of his work with NAWQA, Jeff compiled and analyzed data for two experiments comparing new and old pesticide analytical methods. Jeff is lead author of 17 reports and coauthor of 22 more. Jeff likes talking even more than writing and have given 31 oral presentations at various meetings nationally and locally. One of the best things about the USGS is the opportunity to work with so many fantastic colleagues (you know who you are, but he'll note a few). Jeff wants to acknowledge Charlie Crawford, his mentor in programming, statistics, SAS, UNIX, and so much more for 4 decades. Jon Scott was instrumental in teaching Jeff how to work with the national NAWQA data sets using RDB and PERL. Jeff's knowledge of QC was vastly improved through his work with the talented instructors for the USGS "QC Sample Design and Analysis" training class (Terry Schertz, Dave Mueller, Mark Sandstrom, and Alissa Coes). Working with NAWQA staff, QWDATA experts, the Data Synthesis team, and District and Regional Water-Quality Specialists was a special treat. Jeff plans to travel in retirement, particularly to frequently visit his children on both coasts. When not traveling, Jeff will be an Emeritus USGS volunteer and continue to work with the membership committee of the Indiana Water Resources Association. In the meantime, check out the latest LostWaterBoyz YouTube video "House of the Rising Flood." You can contact Jeff by email at jdmartin@usgs.gov or at jdmjdmjdm@gmail.com if you need a copy of his bibliography.



Dave Reutter retired on September 30, 2019 from the Ohio-Kentucky-Indiana Water Science Center in Columbus, OH. Dave received his bachelor's degree in Geology from the University of Texas at Austin and a master's degree from Texas A & M University. He also spent one year at Virginia Tech taking Environmental Engineering courses. Before joining the USGS, he briefly worked offshore Louisiana for the oil industry and then in Washington, D.C. for the Defense Department doing "top secret" work. Dave began his career with the USGS at the Texas District Austin office in 1991 working on the Trinity River NAWQA. During those works Dave could be seen doing actual field work, collecting groundwater and surface-water samples. Dave got tired of the Texas heat and those mean Texas snakes and moved to Columbus in 1997 to work on the

Great and Little Miami NAWQA. Since 2004, Dave has held the position of Network Management Assistant for the NAWQA National Water-Quality Network. During those years, Dave has been the contact for those collecting NASQAN samples. He spent much of his time annoying people across the Nation with his emails instructing them to collect more samples, code their samples correctly, and review their sample results. A gathering was held on September 27, 2019 to celebrate Dave's service. Dave plans to spend his retirement traveling and putting some miles on his bicycle.



Richard L. 'Dick' Smith retired on June 30, 2019 after nearly 38 years of service to the USGS as a lead research scientist specializing in nitrogen biogeochemistry and nitrogen cycling processes. Dick received a B.S. and M.S. degrees in Biology, specializing in Microbiology, from Western Michigan University in 1973 and 1976. His Masters research topic was on catabolite repression of glucose uptake in *Pseudomonas fluorescens*. He received a Ph.D. in microbial ecology from Michigan State University in 1981, conducting his dissertation research at the W.K. Kellogg Biological Station on sulfur cycling and sulfate reduction in a freshwater, eutrophic lake. In 1981, he was awarded a National Academy of Sciences Postdoctoral Fellowship and began his career with the USGS working with Ron Oremland in Menlo Park. In 1983, Dick was hired permanently by the National Research Program and moved to Colorado to work with Mike Thurman in

collaboration with the newly formed Toxics Substances Hydrology Program. In 1986, he became an NRP project chief working on a variety of research topics in Arvada and later in the Boulder NRP/ESPD facility. He has conducted field research in Antarctica, Alaska, California, Nevada, Colorado, Wyoming, Illinois, Indiana, and Massachusetts. Dick is an international expert and leader in characterizing and quantifying the movement, transformation, and effects of nitrogen species in the environment. He has developed interdisciplinary new methods to study these combined processes in the field, demonstrated the impact that they have on the fate of other co-contaminants, and devised a patented bio- treatment method to remove nitrate from drinking water. He was a co-founder and co-leader of the world-renowned Cape Cod Toxics site, has participated in DOE, NASA, EPA, and NAS panels, workshops and site reviews, is active with the International Symposium on Subsurface Microbiology (ISSM), the AGU executive committee that formed the Biogeoscience Section, and AGU journalism award committees. He has mentored numerous postdocs and students in his laboratory, has collaborated with many outstanding scientists within and outside the USGS, and has given numerous seminars and lectures. He received a Meritorious Service Award, several Superior Service Awards, and multiple STAR Awards. He has authored or co-authored more than 100 publications, including journal articles, book chapters, and reviews. Dick is transitioning to Emeritus Scientist status, where he hopes to continue to mentor, advise, publish, and collaborate on several studies already in progress. He and his wife Elaine will also do some traveling, lots of hiking, and some long-awaited projects on their home in the Colorado Front Range.



Eric Storm is retiring after almost 27 years on August 30, 2019. Eric received his bachelor's degree in Geology from Rice University in 1988. He then received a National Association of Geology Teachers (NAGT) internship at the USGS Woods Hole Branch of Atlantic Marine Geology. There he was able to do a wide variety of tasks, including a dive in the Johnson Sea-Link submarine. He was hooked on the USGS ever since. He went back to school and earned an MS in Geology from Texas A&M and then began his career with the Water Resources Division in Mississippi in 1993. His focus was groundwater modeling. In 1998, he moved to the Texas Water Science Center (WSC) and worked as

the Groundwater Specialist, eventually moving into management as the Associate Director for Investigations. In 2004 he became the Director of the South Carolina Water Science Center, and in 2015 oversaw the merger of North Carolina, South Carolina, and Georgia and became the Director of the newly formed South Atlantic Water Science Center (SAWSC).

Julian Wayland retired on September 27, 2019 after 32 years of Federal service. After service in the US Navy, Julian graduated from West Virginia University with a BS in Mining Engineering. He was a production supervisor in an underground coal mine until it closed and then began a career with the USGS in 1991. Julian started in the National Research Program (NRP) and was the founding analyst for the CFC Lab, now the Groundwater Dating Lab, in Reston, VA. Julian helped to start the lab by analyzing a backlog of about 1000 CFC samples and continues to analyze samples and produce data up to today. He participated in many hydrologic studies across the United States that pioneered the use of isotopes and groundwater-dating tracers. He's made many friends across USGS, through training many field-sample-collection crews to flame seal CFC ampules and to properly collect sample for isotopes and other dating tracers. He was always willing to talk and spend extra time with those that needed it. Julian be sorely missed in the Reston labs. After a short break during which Julian plans to watch traffic go by (difficult to do from his 3/4-mile-long driveway), he plans to buy an RV and a boat and travel with his fishing pole.

Ronald B. 'Ron' Zelt retired at the end of August 2019. Ron attended Concordia College, Seward, NE, where in 1981 he received the B.S. in Education, and later earned the M.A. in Geography from Univ. of Nebraska-Lincoln in 1988, with an emphasis in cartography. During 1987 Ron began his career with a student trainee position with USGS-WRD and a summer fellowship with the CIA, acquiring and applying skills in the emerging fields of GIS and digital cartography. In 1988, Ron transferred to Lawrence, Kansas, where he began his full-time federal career as a cartographer, but soon took courses from the Universities of Kansas and Wisconsin to become a hydrologist. Taking the lead for GIS and spatial analysis on USGS National Water-Quality Assessment Program studies of the Lower Kansas and Platte Rivers (Kansas and Nebraska), he also cut his teeth on field studies as a crew member for ecological sampling and channel-habitat surveys. His desire to better understand rivers led Ron back to school, this time at Colorado State University, where in 2002 he earned the M.S. in Watershed Science. His graduate studies emphasis was fluvial geomorphology, with thesis research focused on wildfire effects on large woody debris and channel stability in mountain streams. That work was funded in part by the GSA's R.K. Fahnestock Award for student research in fluvial geomorphology. From 1996-2002 Ron was stationed at the USGS-WRD Wyoming District. There he was part of the team investigating water quality of the Yellowstone River basin (YRB), and Ron led efforts that produced a report on its environmental setting, several data releases of geospatial datasets, and co-authored a retrospective report on metals in streambed sediment for the YRB. He also led sedimentation studies of the Gibbon and Wind Rivers, and co-led the Wyoming component of the USEPA's EMAP Western Pilot study of streams until he transferred back to Lincoln, NE. While an Associate Director of the USGS Nebraska Water Science Center, Ron's management and technical responsibilities for Nebraska projects were centered in fluvial geomorphology/sediment and water-quality studies. During its 2003-09 period of intensive activity, Ron was an active member of the USGS-NAWQA Nutrient Enrichment Effects Team that studied streams in 8 areas around the Nation. In later years he supported other federal agencies on details to USEPA for the Enbridge oil-spill response in the Kalamazoo River, Mich., and to the Justice Department for topical expert reviews of work concerning metals-contaminated streambed sediment in Ozarks streams of Missouri. His final technical lead was a study of fluvial deposits of the Missouri and Niobrara Rivers near their confluence for potential suitability as proppant (frac sand). For the past 14 years, Ron has held the role of Reports Specialist, first for the Nebraska WSC, and then during 2016-19 for the California WSC. In this role he reviewed information products for their overall quality and adherence to USGS policies and fundamental science practices. Ron authored or co-authored 6 refereed-journal papers and about 25 USGS or externally published reports or articles. Until his 2019 retirement, he was a long-time member of the American Institute of Hydrology, certified as a Professional Hydrologist-Water Quality.

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NL184 (August) CORRECTION (pages 19 &20): Jeff Simley's name should have been associated with the picture in the article "GEOGRAPHY MATTERS"

Geography Matters **Randy Olsen (Retired 2006)**

This is the third article in this series – recall that the first was mostly background and organization, the second one focused on topographic maps, historic and the current *USTopo* program. This article will focus on hydrography.

Hydrography has been a major feature on topographic maps since the beginning of quadrangle mapping, typically presented as the blue layer. It has included rivers and streams, lakes and reservoirs, ditches and canals, underground pipes and tunnels, shorelines, inundated areas of marshes and swamps, and geographic names. The presentation on topographic maps has been largely what can be seen on aerial photographs and interpreted by either the field staff or photogrammetrists. Some of the underground features were located by external sources of information. An important "what was not mapped" was flow direction, river reach identifiers, watershed boundaries, and continuity of flow when rivers ran through water bodies or went underground. I bring this up because these aspects of hydrographic mapping and applications are important to the rest of this article.

USGS began creating and managing a hydrographic geospatial data set in the late 1970's through manual digitizing or raster scanning of the blue layer on topo maps. These were called Digital Line Graph (DLG) data and included not just the geographic locations, but topology that began the inclusion of information that described relationships of features to their surroundings, such as codes for areas to the left and right of the digitized feature. At that time, geographic names were not included. These data sets continued well into the 2000's, were available to the public, and had data users guides available in published USGS circulars. After the 1990 Census, USGS negotiated with the Census Bureau to merge their 1:100,000-scale TIGER data with the DLG program. About the same time, there was an agreement with the Environmental Protection Agency (EPA) to enhance the 1:100,000-scale DLG data to include the EPA's river reach identifiers and begin to connect discontinuous water features where they ran through water bodies or underground. What was then the Water Resources Division also participated in the schema. This data set was the first iteration of what is now the National Hydrography Dataset (NHD).

Since that time, NHD has evolved into higher resolution by increasing accuracy using 1:24,000-scale hydro data (1:63,360 in Alaska), and in some cases larger-scale data, into a robust national coverage. The USGS Stewardship program has enabled State partners to contribute new and updated data to the NHD using high-resolution sources. The hydrography program continues to evolve with the development of NHDPlus – combining the higher resolution with network connectivity and watershed boundary data.

Future plans are to continue adding higher resolution data, deal with complex direction of flow issues in flatlands, and to use LIDAR elevation data (IFSAR in Alaska) to better define watershed boundaries and streamflow locations, so that hydrologic data and elevations are more geospatially integrated for geographic systems applications.

Jeff Simley, a recent retiree and a co-worker when I was at the Rocky Mountain Mapping Center, has written a book in consort with ESRI that has a tremendous amount of information on hydrography as a science, evolution of the NHD, and future thoughts on interactions with the elevation technology. The book is *GIS for Surface Water Using the National Hydrography Dataset*.

If we continue this series, my next article will focus on elevations, including contours on topo maps, early days of elevation data as a by-product of orthophoto production, Digital Elevation Models, and what is now the 3DEP program at USGS.

NEWS NOTES ON SUSTAINABLE WATER RESOURCES

Land Use and Land Cover

Land use has many direct and indirect impacts on water resources. Because this is not considered in many cases, some background on it is offered here.

“Landuse and landcover change (LULCC); also known as land change) is a general term for the human modification of Earth's terrestrial surface. Though humans have been modifying land to obtain food and other essentials for thousands of years, current rates, extents and intensities of LULCC are far greater than ever in history, driving unprecedented changes in ecosystems and environmental processes at local, regional and global scales.

These changes encompass the greatest environmental concerns of human populations today, including climate change, biodiversity loss and the pollution of water, soils and air. Monitoring and mediating the negative consequences of LULCC while sustaining the production of essential resources has therefore become a major priority of researchers and policymakers around the world.”

More information can be found here: http://ecotope.org/people/ellis/papers/ellis_eoe_lulcc_2007.pdf

“USGS scientists have a long tradition of providing high-quality, consistent, and relevant land-cover data for the United States, using our archive of current and historical remote sensing data. [The National Land Cover Database \(NLCD\)](#) provides consistent, spatially explicit, periodically updated maps of land cover for the United States, with mapped dates for 1992, 2001, 2006, and 2011 (in progress). [The USGS Land Cover Trends project](#) has mapped and analyzed historical land-cover change from 1973 to 2000 using the Landsat satellite image archive. [The Landscape Fire and Resource Management Planning Tools Project \(LANDFIRE\)](#) provides multiple landscape attributes to support land managers and modelers. Together, these data provide a suite of data and information on current and recent historical land-cover change for the United States.

Scientists at EROS are using their experience in mapping land cover and their knowledge of land-cover change processes to temporally extend these databases beyond the dates of available remote sensing data. Using the EROS FOREcasting SCEnarios of Land-Cover (FORE-SCE) model, EROS scientists are modeling land-cover change both into the future, using scenario-based modeling approaches, and for "backcasting" land cover for historical periods. In combination with USGS remote sensing based land-cover data, EROS' modeling efforts result in consistent, annual land-cover maps from 1938 through 2100, with multiple scenarios of potential land cover for future periods.”

More details about USGS efforts can be found here:

<https://www.usgs.gov/land-resources/eros/lulc>