

TRA's
No Name

GAZETTE

For Northrop Grumman & TRW Legacy Retirees

VOL. XXXII NO. 6

Our 32nd Year

November/December 2020

Virtual Speaker Event with Jeff Grant

By Stephanie Sundius

On Friday, September 18, 2020, TRA sponsored its first virtual social event, a “computer-side chat” using the Zoom platform. 2018 retiree and current book author Jeff Grant talked about his career, book, and his time at Space Park. The last issue of the NNG had an article on Jeff’s book, “The Swamp: Deceit and Corruption in the CIA.”

Many of us know Jeff as the Vice President and General Manager of the Space Systems Division, a position Jeff took after the retirement of Dave DiCarlo in 2011. Prior to joining Northrop Grumman, Jeff spent 22 years at the CIA within the Directorate of Intelligence, the Directorate of Science and Technology, and as office director in the Community Management Staff working under then CIA director Jim Woolsey.

We had 123 fellow retirees and members of the NG/TRW private Facebook group sign up for the event. Host Reggie Jue started the meeting and established protocols, after which TRA President Dena Bouskos introduced Jeff Grant. We spent an hour getting insights from Jeff about his experiences in the intelligence community, working at Northrop Grumman, and life as a retiree.

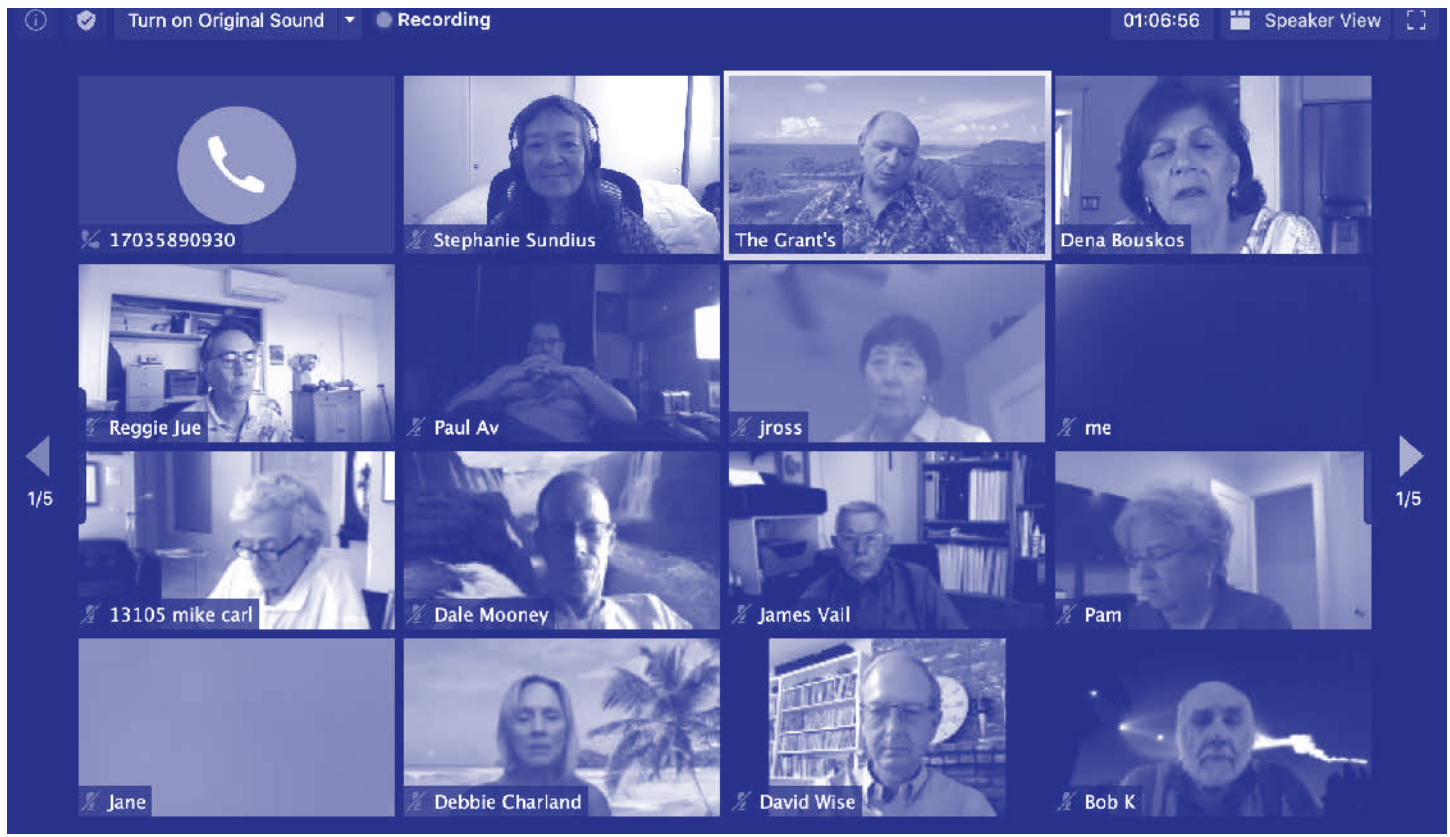
This was a great opportunity for all of our members to participate. While the majority of participants were based in the Southern California area, 23 were from outside the state, and 20 were from outside the Los Angeles area, mostly the San Diego and Central Coast areas.

Feedback from the event was positive, with participants asking interesting questions about the possibilities the book brings up, the future scenarios the world and US will face, and insights into Jeff’s time at Northrop Grumman.

A recording of the event is available on the TRA website, www.tra-spacepark.org.

We are currently planning for our next virtual event in February with Scott Willoughby, Vice President and Program Manager for the James Web Space Telescope, who will update us on program status. More details will be in our next issue. Scott’s upcoming talk is a good reason to keep your membership up to date.

Do you have any other ideas for future speakers or online events that would be of interest to TRA members? Let us know! Send us an email at tra@tra-spacepark.org.



TRA for Northrop Grumman Retirees

The Retirees Association (TRA) welcomes the retirees of Northrop Grumman and TRW.

2020 Officers

Dena Bouskos	President
Jack Trost	Vice President
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Robert Doll, Reggie Jue, Joyce Komatsu, Pam Overton, Stephanie Sundius

Facebook Coordinator: Stephanie Sundius

Membership: Joyce Komatsu

Webmaster: Reggie Jue

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By Email:

TRA@tra-spacepark.org - Your emails will be routed to the appropriate source. And, if we have your e-mail address on file, we send out special alerts to TRA members as the need arises. To get on the TRA email list, just send us a brief email requesting to be added to it.

By Web:

Our website is at www.tra-spacepark.org. It is an excellent source for the latest news, lists of the new retirees, travel details, party photos (more than get into the NNG), forms of all sorts, personal photographs, and much more. Register, log on, and browse.

For Membership:

TRA Membership is open to Northrop Grumman and TRW-legacy retirees at \$10 per calendar year. The application is available on the website.

Please Check Your Membership

Please take a moment and check your mailing label on this issue. If it says "Paid Thru" and the date is 2020, that means your membership will expire in 2021.

If you have renewed in the last couple of weeks, don't worry. Due to the time it takes to get the NNG printed and mailed our mailing list may not have been updated with your latest payment.

TRA membership is a real bargain at just \$10.00 per year! The NNG provides you with happenings at Northrop Grumman, the Mail Pouch, special articles with information about our members, and sign-ups for the events we hold during the year.

You have two choices on how to renew: on-line or by mail.

To renew on-line, go to our web site, www.tra-spacepark.org, and follow the prompts. We process your renewal dues securely through Paypal. To renew by mail, please cut out or copy the form below, fill out the requested information, and mail to TRA with your check.

Renewals for more than one year are welcome because they reduce our in-house paper shuffle. So, consider renewing for four years to save time and money.

Thank you for your support!

New TRA Members

Robert S. Bradford

Judith Flentye

Michael Wheaton

Kilaeua, HI

Redondo Beach, CA

Santa Clarita, CA

We hope these new members will send a note to us at mailpouch@tra-spacepark.org telling us a little about themselves and where they worked at Northrop Grumman/TRW.

MEMBERSHIP RENEWAL FORM

Member Name: _____

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Annual dues are \$10 per year. I would like to renew for:

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Mail with a check payable to "TRA" to the following address: TRA, P.O. Box 1276, Redondo Beach, CA 90278

And, please, include a note for the Mail Pouch about yourself, your family, and your doings!

HAPPENINGS AT NORTHROP GRUMMAN

Northrop Grumman Elects Tom Jones Corporate Vice President and President, Aeronautics Systems; Janis Pamiljans to Retire

Northrop Grumman Corporation announced that its board of directors has elected Tom Jones corporate vice president and president, Aeronautics Systems, effective January 1, 2021. Jones will succeed Janis Pamiljans, who has announced his intent to retire on February 26, 2021.

"Tom has consistently demonstrated his ability to lead complex businesses in the aerospace and defense industry," said Kathy Warden, chairman, chief executive officer and president, Northrop Grumman. "He is a seasoned executive and I am excited about the vision he has for our Aeronautics business."

"On behalf of the company and the board of directors, I want to sincerely thank Janis for his significant contributions over his 34-year career with Northrop Grumman," said Warden. "His leadership, business and manufacturing prowess and unwavering commitment to our employees and customers is a hallmark of everything he does."

Pamiljans will continue as corporate vice president, reporting to Warden to support this transition and other company initiatives until his retirement.

Jones is currently sector vice president and general manager of Northrop Grumman's Airborne Sensors & Networks division in the Mission Systems sector. This business delivers large-scale, mission-critical C4ISR systems and complex hardware and software products for airborne platforms, including many from the Aeronautics Systems sector. Previously, he led advanced technology and undersea systems businesses.

Jones has 30 years of experience in the aerospace and defense industry. He joined Northrop Grumman in 2011 from The Boeing Company. He holds bachelor's and master's degrees in electrical engineering from Kansas State University.

NASA's James Webb Space Telescope Completes Environmental Testing

With the completion of its latest series of milestone tests, NASA's James Webb Space Telescope (JWST) has now survived all of the harsh conditions associated with a rocket launch to space.

Each component of the telescope has been rigorously tested during development, demonstrating that the assembled flight hardware is able to safely pass through a simulated launch environment — a significant achievement for the mission. Completed in two separate facilities within Northrop Grumman's Space Park in Redondo Beach, California, these represent JWST's final two tests in a long series of environmental tests before JWST is shipped to French Guiana for launch.

"The successful completion of our observatory environmental tests represents a monumental milestone in the march to launch. Environmental testing demonstrates JWST's ability to survive the rocket ride to space, which is the most violent portion of its trip to orbit approximately a million miles from earth. The multinational group of individuals responsible for the execution of the acoustic

and vibration test is composed of an outstanding and dedicated group of folks who are typical of the entire Webb team," said Bill Ochs, JWST project manager for NASA Goddard Space Flight Center (GSFC) in Greenbelt, Maryland.

"The testing team is an international consortium of structural dynamics experts who are the lead engineers for each piece of hardware on the observatory. The team members are located throughout the USA and Europe, spanning across 9 time zones! They are extremely dedicated to support testing at all hours and days to provide their expertise," said Sandra Irish, Webb Mechanical Systems Structures Engineer Lead for GSFC. "Through the team's dedication, hard work, and just pure excitement in being a part of this complex test, it was a complete success! I have known these individuals for many years and it's been an honor to work with each one of them."

JWST is now scheduled to move forward into the last full extension of its iconic primary mirror and sunshield followed by a full systems evaluation before being encapsulated in a specialized shipping container for transport to South America. Deploying the observatory after experiencing a simulated launch environment is the best way to replicate the true series of events the observatory will experience during launch, and when performing its complex deployment sequence in space. Initial analysis suggests the observatory passed through observatory level acoustic and vibration testing successfully, but the full verification of flight worthiness will occur after JWST has successfully completed final deployment tests.

JWST Remains on Track for October 2021 Launch

NASA's James Webb Space Telescope (JWST) remains on schedule for a launch in a little more than a year, but the program is still dealing with some technical issues that could eat into its schedule reserve.

At an Oct. 19 meeting of NASA's Astrophysics Advisory Committee, Eric Smith, JWST program scientist, said the mission was making good progress after the agency decided in July to delay the launch by seven months, to the end of October 2021. That delay, NASA officials said then, was caused in part by the coronavirus pandemic, which slowed down work on the telescope at a Northrop Grumman facility in Southern California.

Earlier this month, NASA and Northrop completed the final set of environmental tests on JWST, where the integrated spacecraft was subjected to acoustic and vibration conditions like those it will experience during launch. Smith said they are now moving to a final series of deployment tests of key telescope structures, such as its sunshield, which will continue through the spring of 2021. At that point it will be packed for shipment to the launch site in French Guiana.

That work is remaining on schedule. "We used some days of schedule reserve as we went through environmental testing. The good news is that we didn't use all of the funded schedule reserve we have for that, so we're able to push a few of those days forward and have them for schedule reserve later on," he said. The mission has about 75 days of schedule reserve as of September, according to a chart he showed at the meeting, roughly 10 days more than the plan for that phase of development.

JWST is still dealing with some technical issues. One ongoing one is a concern that residual air trapped in the folded sunshield could overstress it when the Ariane 5 that launches the spacecraft jettisons the payload fairing. Smith said the program has been

working with Arianespace to change air vents in the fairing.

On two Ariane 5 launches with the new vents, sensors measured residual air pressures inside the fairing nearly double the rated capability of the sunshield. "There's a little more pencil sharpening that has to be done on this issue," he said.

That work includes work by NASA and Northrop Grumman to see if the spacecraft can tolerate the higher residual pressures measured on the launches. If not, he said some parts of the spacecraft may need to be "patched" to handle the higher pressures, work he said would be completed by December.

"It's only a few places in the sunshield where it feels the stress above requirements," he said. Any patching work, he estimated, would require no more than a few days of schedule margin.

A new issue is a concern raised by Northrop from work on another program that some fasteners may not have been installed with sufficient torque. Smith said the JWST team looked at more than 12,300 fasteners and determined that about 160 needed to be retorqued during deployment tests. He said it wasn't clear what schedule impact, if any, that work would have.

Northrop Grumman and NASA Donate Shuttle Boosters to California Science Center

Northrop Grumman and NASA have donated a set of flight-worthy solid rocket boosters from the Space Shuttle Program to the California Science Center, located in Los Angeles, California, to display with the Space Shuttle orbiter Endeavour and a real Space Shuttle external tank in a launch configuration.

"The contributions made by the Space Shuttle Program to space science and exploration have been powerful," said Charlie Precourt, vice president, propulsion systems, Northrop Grumman. "We are excited to share a piece of our more than 30 year legacy with future generations to help inspire a new era of explorers."

The California Science Center's goal for this exhibit is to preserve and display the only existing full stack of an orbiter, genuine solid rocket boosters, and external tank in the launch position. The Space Shuttle Endeavour will be the centerpiece in the future Samuel Oschin Air and Space Center, the Phase III expansion project of the Science Center.

After NASA awarded the last existing flight-worthy external tank (ET-94) to the Science Center Foundation in 2015, it became evident it would be critical to have a flight-worthy set of solid rocket boosters, not only for authenticity but also for seismic structural safety. Air and Space Center Project Director Dennis Jenkins made the request to Northrop Grumman.

The booster cases that Northrop Grumman are donating to the California Science Center have flown on a combined 81 space shuttle flights and have been part of 32 ground tests.

"As for the non-motor parts of the booster, we sourced a set of flight-worthy aft skirts and frustums from NASA surplus and a set of forward skirts that were used for tests for NASA's Space Launch System Program in Utah at Northrop Grumman," said Jenkins. "Northrop Grumman and NASA are providing most of the smaller parts, like booster separation motors, from surplus."

The donation of the shuttle boosters builds upon a more than decade long partnership the company has had with the Science Center. Northrop Grumman has sponsored the California State Science and Engineering Fair and several of the company's employees volunteer their time each year to advance STEM education by supporting various events.

Northrop Grumman Initiates Build of First Australian Triton

Northrop Grumman has initiated the build process for Australia's first MQ-4C Triton, a game-changing unmanned maritime intelligence, surveillance and reconnaissance (ISR) aircraft. In a ceremony broadcast to a virtual audience, speakers from the Australian Government, Royal Australian Air Force (RAAF), U.S. Congress, U.S. Navy, and Northrop Grumman emphasized the significance of this event. The MQ-4C Triton will bring Australia an unprecedented amount of maritime domain awareness.

"The MQ-4C Triton will be a very important ISR capability for Australia," said Air Commodore Terry van Haren, the RAAF's air attaché to the Australian embassy. "It is ideally suited for Australian operating conditions, given its high altitude, long endurance, and impressive sensor suite. The Royal Australian Air Force looks forward to operating the MQ-4C alongside its other ISR and response aircraft such as the P8A Poseidon."

Capt. Dan Mackin, the U.S. Navy's Triton program director, applauded the continued progress of the program, stating, "With much of our team working remotely, geographically dispersed, and across many time zones, I am so impressed with the continued productivity I have seen and the great work being done. Our partnership near and far remains strong as we prepare to deliver the first Triton aircraft to Australia in 2023."

"As a strategic partner in the cooperative development program, Australia is a critical part of Triton's development and production," said Doug Shaffer, vice president, Triton programs, Northrop Grumman. "This game-changing system will boost Australia's ISR capability and enable them to meet their surveillance needs to manage the world's third largest exclusive economic zone."

Northrop Grumman Receives \$13.3 Billion Contract to Develop Next-Generation ICBM

The Department of the Air Force has awarded Northrop Grumman a \$13.3 billion contract to develop the Ground Based Strategic Deterrent (GBSD) intercontinental ballistic missile.

The GBSD is the follow-on to the Minuteman 3 ICBM that first became operational in 1970.

"Modernizing the nuclear strategic triad is a top priority of our military," Defense Secretary Mark Esper said in a statement. "It's key to our nation's defense." The Air Force plans to deploy the GBSD beginning in the late 2020s.

In the absence of other competitors, Northrop Grumman received a sole-source contract. The \$13.3 billion development phase is expected to run about eight years. The entire GBSD program is projected to be worth up to \$63 billion over 20 years.

The Air Force confirmed last December that Northrop Grumman was the only bidder for GBSD after Boeing decided to drop out of the competition. Boeing said Northrop Grumman's dominance of the solid rocket motors market gave it an overwhelming pricing advantage it could not compete against.

The nation's only other manufacturer of solid rocket motors, Aerojet Rocketdyne, joined Northrop's team in September. Other partners include Bechtel, BRPH, Clark Construction, Collins Aerospace, General Dynamics, Honeywell, Kratos, L3Harris, Lockheed Martin, Parsons and Textron Systems. Northrop's GBSD operations will be headquartered in Utah, near Hill Air Force Base.

Benefit Contacts for Retirees

Northrop Grumman Benefits Center (NGBC)

www.benefits.northropgrumman.com

Phone: 800-894-4194

This is the main contact for Northrop Grumman employee and retiree benefits. Here you can report a change of address, report a death, or apply for a pension. See the "Retirement" menu item on the NGBC home page for retiree services.

Fidelity NetBenefits

www.netbenefits.com/northropgrumman

Fidelity administers pension payments and the Northrop Grumman savings plan.

Via Benefits (a Tower Watson Company)

www.viabenefits.com

Phone: 855-832-0976 (M-F 8AM-9PM Eastern)

Via Benefits handles Medicare supplemental insurance and open enrollment.

A small number of TRW retirees receive their medical benefits through the Northrop Grumman Benefits **Service** Center. This center is staffed by Benefits Outsourcing Solutions, Inc. Their number is 800-410-6605.

Metlife

www.metlife.com/NGC

Phone: 866-492-6983

Metlife administers your life insurance if, after you retired, you continued your coverage under the Northrop Grumman group plan.

If you were employed by TRW and retired before January 1, 2006, your estate may be eligible for a benefit, payable on your death. Contact the NGBC for more information.

Northrop Grumman Space Segment Posts 17% Sales Increase in Third Quarter

Northrop Grumman reported a strong third quarter, led by double-digit sales increase in its Space Systems segment. Space Systems sales increased 17% from third quarter 2019, to about \$2.2 billion. Space sales have increased 13% year to date.

Northrop Grumman attributed the increase in Space Systems to higher sales in both Space and Launch & Strategic Missiles. Space sales were driven by higher volume on restricted programs, Next Generation Overhead Persistent Infrared (Next Gen OPIR) and NASA Artemis programs. Launch & Strategic Missiles sales reflect higher volume on launch vehicles and hypersonics programs, partially offset by lower volume on the Commercial Resupply Service missions.

Kathy Warden, chairman, CEO and president highlighted two contract awards in the third quarter for Space Systems: a \$13.3 billion contract for the engineering and manufacturing development (EMD) phase of the Ground Based Strategic Deterrent program; and a U.S. Space Force contract for the rapid prototyping phase of the Evolved Strategic SATCOM (ESS) program. Warden said the ESS award is a multi-billion dollar program opportunity.

IN MEMORIAM

Roy Batista, August 22, 2020. Roy worked at TRW for over 28 years and retired as Senior Section Head in the Metals and Ceramics Department.

Richard Beverly.

Jerry Gliksman, October 3, 2020. Jerry joined the TRW Space Park team in 1965 as a lead structural engineer. As his career progressed, he was Program Manager for numerous satellite programs including ROCSAT, TDRSS, DSP, and GRO. He loved being an engineer and was especially proud of being Program Manager for DSP and GRO (his baby). He was awarded the NASA Public Service Medal in 1992 for his GRO work. He was well respected and loved by all who worked with him and for him.

Thomas Graham, March 17, 2020.

James Guardino, August 31, 2020. Jim worked at TRW in Manufacturing for over 25 years.

Douglas McCormac, 79, January 6, 2020. Doug worked in the Aerospace industry in Southern California eventually running TRW/CI.

Tom Nosek, September 22, 2020. Tom loved sailing, tennis, skiing, and scuba diving, and in between found time to become a GN&C expert. He worked in defense and later in spacecraft, including the Aura earth observation program. He called himself a kleptofactomaniac - "When I see a fact, I must possess it." This served him well in his several stints on Jeopardy!, including a win in the 1993 Tournament of Champions. He loved good food and good wine, and if you would toast him over dinner and remember him fondly that would be a fine thing and fitting.

Winnie Pang, 55, July 4, 2020. Winnie started at TRW/NG in 1989 and spent the better part of her 31 years there supporting National Defense Programs. As an Electrical Systems Engineer, she was heavily involved in the design, analysis, testing, and verification of many complex electrical systems. Winnie made a lasting impact on all those she worked with and she will be greatly missed by her TRW/NG family.

Al Smith, October 11, 2020. Al was truly one of the good guys. From his deep voice in the TRW choir to his leadership in IT Security, he will be fondly remembered.

Thomas Tarantino, 85, December 2, 2019. Thomas worked for TRW for 32 years and retired as a program manager in Fairfax, VA in 1999.

Charles Max Williams, October 22, 2020.

The first step in notifying Northrop Grumman of a retiree's death is to call the Northrop Grumman Benefits Center. For many retirees, there is a Burial Benefit which will be paid to the beneficiary upon proper notification of death.

If the deceased was a member of TRA, please notify TRA whether you want the NNG continued for the duration of their subscription or to be removed from future mailings.

If you know of a person that should be included in the "In Memoriam" column, please inform us by either email or mail to the TRA office. As a minimum, we need the name of the deceased, date of death, and the name of the person submitting the information. If more information is available and desired, include age, position and years at NG/TRW, any notable programs, and special skills.



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The next NNG will be
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THE MAIL POUCH

◆◆◆ From her TRW/TRA Family - belated Happy Birthday wishes to **Jacqueline Johnson**, who turned 100 in September! ◆◆◆ From **Nati Prieto** ... Life is great within my family. My husband and I are excited for the upcoming family trip (son and daughter) to Argentina. We are also booked for a River Cruise on Viking from Germany to Budapest, highlight is to see Oberammergau (Passion Play). We are also booked on the Queen Elizabeth to celebrate our 48th wedding anniversary. That will be a one month cruise from Japan to Australia. We're enjoying life to the fullest! ◆◆◆ From **Mark Levine** ... Enjoying life here in Flagstaff. Play tennis a few times a week with **Ron Hren** and **Phil Brunner**. **Steve Jacobs** also lives here and we all have coffee a few times during the year. Also ski at Mammoth. I enjoy **Mary Funnynames**' pictures - especially when she finds someone from DSP! ◆◆◆ From **Annabelle Peterson** ... I live in Minnesota with my daughter and son-in-law. I have 3 grandchildren and 3 great-grandchildren with twin girls due in March. I used to winter in Las Vegas but am older so this is my place. I am from Michigan so I still go there for visits as I am from a family of 11 children. Lots of relatives there! Keep up the good work of keeping retirees informed. ◆◆◆ From **Charles Morse** and his wife **Scooter** ... Scooter and myself have been doing a lot of traveling. In the Fall of 2019 we went to Italy and France, then to Alabama. In February we went to California. ◆◆◆ **Bob (Mitch)** and **Lynn Mitchell** can't believe that we have been retired for 22 going on 23 years from TRW!!! We moved to Corona, CA and are still here. We did a lot of traveling when we first retired but now, with some health problems, we don't venture out much. We love seeing all the pictures in the TRA and enjoy

By Pam Overton
reading the Mail Pouch. We often wonder if any of the people we worked with are still at Northrop Grumman. ◆◆◆ From **Dorothy Burgess** ... I'm enjoying retirement and the visits from my children; both live out of state. My daughter is in Colorado Springs and my son is in Maui. ◆◆◆ From **Tom Coffey** ... Between classes (Spanish/German/Art painting) and traveling I don't have a lot of spare time. I travel mostly to central and eastern Europe, usually including one or two river cruises. Otherwise we travel by train or air. We visit art museums to see classical modern art often in German towns that even German citizens have never heard of! I also have several favorite bookstores in Germany where I buy new and used books on classical modern art (cubism, fauvism, German expressionism, futurism, etc.) and have the books shipped to the U.S. This year will be our third trip to Europe lasting 35 days or more. I miss all the people I knew at TRW but see some Controls System personnel at monthly breakfasts. ◆◆◆ From **Ray** and **Barbara Renken** ... It has been a little over 15 years since we left Rolling Hills Estates. I retired in 1993, consulted for 11 more years and then we followed the young ones to Oregon. It has been exciting to watch the grand kids grow up and help them pursue their dreams. We even have one serving in the Navy. Barbara and I have been traveling with our friends at Ascension Lutheran Church (in RHE). The most notable trips were following Luther's footsteps in Germany and Jesus's footsteps in Israel. We also have been actively working within the local city government on various issues. In addition, I have been involved with our church in a bunk bed ministry program building the beds and delivering to families in need. ◆◆◆