

United States Public Health Service

MACHINATORES VITAE

Engineer Community Newsletter

From the Chief Engineer Officer



Edward M. Dieser, P.E.
Rear Admiral, US Public Health Service
Assistant Surgeon General

Spring 2019

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It was great to see all of the attendees at both the COF Symposium and SAME Joint Education and Training Conference – albeit during the same week in May. The key theme for each of you as individual officers is READINESS. What is your readiness status? What is your deployment role? Are you competent in that role and/or additional roles? Are you ready to leverage opportunities in your agency duties to advance health? Advance our profession? Advance your career?

The Assistant Secretary for Health, ADM Giroir, highlighted the positive outcomes from the Corps assessments and recent meetings with HHS Leadership and the Office of Management and Budget. His recent town hall meeting this month provided a similar message, as well as additional updates from the Surgeon General, VADM Adams, and RADM Orsega regarding hiring actions, organization, and process improvements at Headquarters. Positive news indeed.

One opportunity for engineers to leverage is service on EPAC – as a member or volunteer. EPAC is a great way to support your fellow engineers, enhance your own readiness, and collaborate with other outstanding engineers. The importance of networking should not be under estimated.

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Again, thank you all who attended the conferences. I hope it renewed your energy and commitment. Carry that to your colleagues and communities.

If I was a character in an old movie – I would be inspired to say: “hold steadfast, I feel there is a favorable shift to the winds and seas.”

Machinatores Vitae – Paratus, Volens, Peritus

RADM Edward M. Dieser, P.E.

If you have any questions or comments related to the Engineering Category or EPAC activities, feel free to contact any of the following EPAC members.

EPAC	Point of Contact	Agency	e-mail
Chair	CDR Samuel Russell	EPA	Russell.Sam@epa.gov
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Rules/Recruitment (Chair)	CDR Samantha Spindel	FDA	Samantha.Spindel@fda.hhs.gov
Recruitment (Vice Chair)	LCDR Praveen K.C.	EPA	KC.Praveen@epa.gov
Awards (Chair)	LCDR Abbas Bandukwala	FDA	Abbas.Bandukwala@fda.hhs.gov
Awards (Vice Chair)	CDR John Kathol	IHS	John.Kathol@ihs.gov
Career Development (Chair)	LCDR Omobogie Amadasu	IHS	Omobogie.Amadasu@ihs.gov
Career Development (Vice Chair)	LCDR Deborah Cox	EPA	Cox.Deborah@epa.gov
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Public Health Engineering Practice (Vice Chair)/ Executive Secretary	CDR Leo Angelo Gumapas	NIH	Leoangelo.gumapas@nih.gov
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Rules (Vice Chair)	LCDR Matthew Hunt	NIH	Matthew.Hunt@nih.gov
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Special Assignment: Engineer Impact Measure	LCDR Matthew Palo	FDA	Matthew.Palo@fda.hhs.gov
Special Assignment: Engineer Impact Measure	CDR Jitendra Virani	FDA	Jitendra.Virani@fda.hhs.gov
EPAC Website			https://dcp.psc.gov/osg/engineer/



An Inspiring Story at a Holiday Party

On Thursday, December 13, 2018 at the Army and Navy Club in Washington, DC, the Washington DC Post of the Society of the American Military Engineers (SAME) hosted its annual holiday party.

Keeping with tradition, a new slate of board officers was approved. Scholarship awardees were announced, and a donation was made to a wounded warrior program, [Team River Runner \(TRR\)](#), whose mission is *"to provide all veterans and their families an opportunity to find health, healing, community purpose, and new challenges through adventure and adaptive paddle sports."* In short, TRR likes to say they put "butts in boats."



Pictured (L to R) BG Goddard, CAPT Nelson Mix, CDR Varsha Savalia, and LT Michael Simpson

Following remarks from TRR, Brigadier General Glenn A. Goddard, PE, US Army Corps of Engineers shared the story of his father, who he never saw walk. Ralph A. Goddard enlisted after high school at the age of 17 and served in World War II. Upon his return, he completed a bachelor's degree at Emory University and was accepted to medical school at Boston University (BU). That was in 1952, when the country suffered its worst polio epidemic with over reported 57,000 cases. While volunteering during that summer with polio victims, he contracted polio and became a quadriplegic. BU continued to hold his spot as he improved to a paraplegic, and eventually graduated in the first class to include doctors with physical disabilities. Dr. Ralph A. Goddard, MD, became a child psychiatrist who married, raised five children and dedicated his life to serving others. All in attendance were moved and motivated by the Goddard family story.

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EPA Hosts the PHS Engineers Award Ceremony

On February 22, 2019 US Environmental Protection Agency (EPA) engineer officers hosted the US Public Health Service (PHS) Engineers Award Ceremony, in Washington, DC. The one-hour event was preceded by complimentary, light breakfast refreshments, and was followed with networking and a tour of the EPA Emergency Operations Center. After the PHS Engineer Awards Ceremony, several in attendance walked to the National Press Club to attend the National Society of Professional Engineers Federal Engineer of the Year Award (FEYA) luncheon.

Acting EPA Administrator Andrew Wheeler and Surgeon General Jerome Adams spoke at the event and took pictures with attendees. RADM Edward Dieser, Engineer Chief Professional Officer (CPO) presented the awards. The emcee was CDR Samuel Russel, EPAC Chair. Other notable attendees included RADM Joan Hunter (DCCPR), RADM Mark Calkins (IHS), CAPT John Eckert (Scientist CPO) and Brigadier General Joe Schroedel, (US Army retired and Executive Director of the Society of American Military Engineers), and family members of the FEYA top ten finalists.



Acting EPA Administrator Andrew Wheeler addressing attendees at EPA Headquarters

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CPO and EPA Engineer Awards Ceremony planning committee:
Pictured (L to R) RADM Edward Dieser, CAPT Nelson Mix, CDR Stacey Younce,
CDR Samuel Russell, CDR James Kohler, LCDR Praveen KC

Fun facts: National Engineers Week was last celebrated in Washington, DC by PHS at the 2013 PHS Engineer Centennial Celebration held in the original [PHS Headquarters Building](#). In the early 2000s, the Engineer Awards Ceremony was routinely held at the Uniformed Services University of the Health Sciences (Bethesda, MD) and has since been hosted on a rotating basis at the FDA (White Oak, MD), NIH (Bethesda, MD) and IHS (Rockville, MD). In 2019, the Engineer Awards Ceremony was hosted by the EPA. The idea of rotating the locations encourages broad attendance and fosters Esprit de Corps. The 2019 Engineer Awards Ceremony was broadcast live from EPA and can be watched on YouTube at: <https://www.youtube.com/watch?v=Q-bt6-yfE5M>

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Getting Involved in Educating the Community on how Engineers Contribute to Public Health

LT Timothy Martin and LT Jong Ho Won

READY! FIRE! AIM! Have you ever been put into the middle of things and been a bit remiss in preparation? This happened to me. I, a newly commissioned PHS engineer, was leading a public health outreach event and a civilian participant asked, "How are engineers in the Public Health Service contributing to public health?" I was thrown off and didn't have my 30-second elevator speech prepared. Preparation is great, but there also is no substitute for actually "doing," especially in demonstrating leadership and executing your plan.

A new workgroup named Prevention through Active Community Engagement (PACE) aims to prepare engineers for leading public health engineering outreach events (Figure 1). The PACE workgroup started in January 2019 under EPAC's Public Health Engineering Practice (PHEP) subcommittee. The PHEP/PACE workgroup is coled by LTs Timothy Martin and Jong Ho Won and advised by CDR Leo Gumapas. We are currently investigating the top public health engineering issues in the nation. The purpose of the PHEP/PACE workgroup is to:

- Identify niche knowledge and skill sets within the Engineering Category to develop lesson plans and educational material on current engineering topics affecting the future health and safety of the nation.
- Organize and conduct PACE events in local communities.
- Encourage leadership among junior engineer officers to lead PACE events.



Figure 1. The Maryland and Washington, D.C. PACE teams hosted a booth at the 2019 American Association for the Advancement of the Sciences (AAAS) Family Science Days entitled "Movement is Power." Ten officers (two of whom were EPAC engineers) encouraged 758 children to power a music player by pedaling a bike. #MoveYourWay #FamSciDays

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PACE is a chartered advisory group under the Office of the Surgeon General (OSG). PACE uses evidence-based education materials tailored toward multiple school ages in at-risk communities to provide community outreach activities (Figure 2) aligned with the initiatives of the OSG and the Office of the Assistant Secretary for Health.

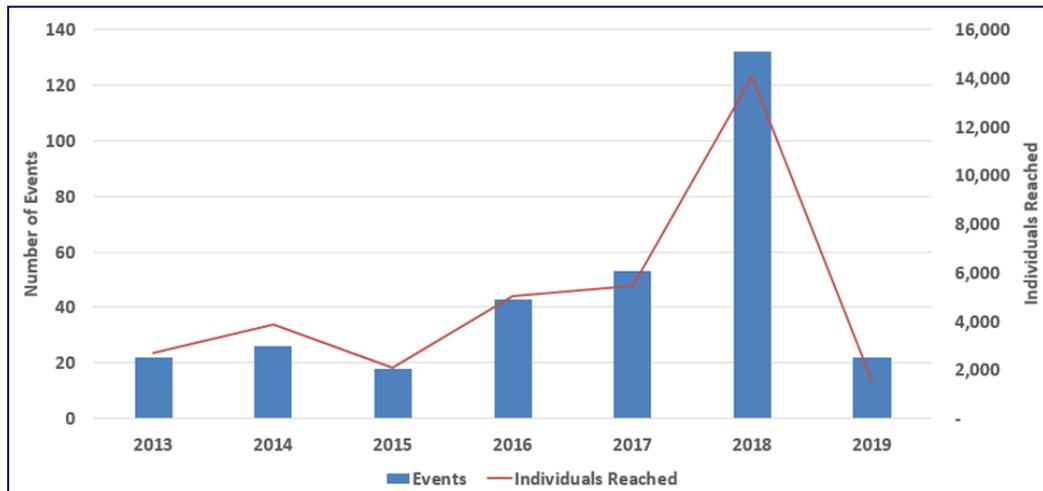


Figure 2: PACE is becoming increasingly active. Activity has spanned two countries (USA and Zambia), 24 states, and 119 cities. One-hundred and fifty-five officers have led 310 events with a total of 569 officers contributing 4,145 hours of service time. As of February 2019, 33,149 individuals have been reached by the Surgeon General’s initiative.

EPAC Engineers can contribute to PACE outreach events through the new PHEP/PACE workgroup. To date, EPAC engineers have contributed to standardizing and presenting interactive lessons on protecting air and water quality. Currently, 22 EPAC engineers have been involved in PACE activities; that represents only 7% of total contributions made by all categories (Figure 3). A main goal of the PHEP/PACE workgroup is to increase PHS engineer participation in PACE events by 25%. PHEP/PACE provides a platform for a creative expression of engineer outreach and provides leadership for engineers to be teachers who can encourage the next generation by sharing engineering knowledge.

To find out more about PHEP/PACE workgroup and PACE, please join the listserv and participate in the recurring meetings: <https://list.nih.gov/cqi-bin/wa.exe?A0=nps-pace>. PACE posts weekly updates regarding the program, including requests for new events and calls for volunteers at scheduled events. Additional information and lesson plans can be found at the PACE MAX.gov site <https://community.max.gov/x/YQXpTQ>. If you have ideas or questions about the new PHEP/PACE workgroup, please contact the co-leads LT Timothy Martin (Timothy.Martin@fda.hhs.gov) or LT Jong Ho Won (Jongho.Won@fda.hhs.gov).

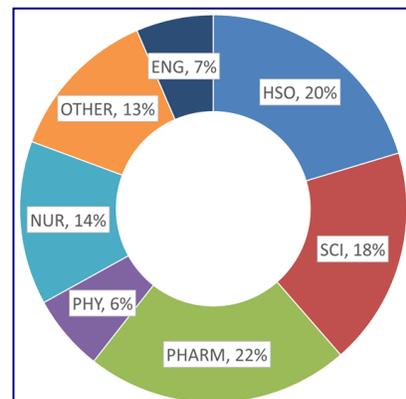


Figure 3. Category participation in PACE community outreach events.



A Perspective on Leadership

CAPT Nelson Mix

On June 6, 2018 at the Commissioned Officers Foundation (COF) Symposium, I was recognized by the Chief Engineer and EPAC as the recipient of the RADM John C. Villforth Leadership Award. Throughout my career I've had memorable experiences related to leadership. Here are a few:

- Early 2000s: I was inspired by RADM Robert C. Williams (ret.) at Engineer Awards Breakfasts. (These types of events are worth attending!)
- Mid 2000s: I learned of Sir Ernest Shackleton during a SAME Golden Eagles Dinner, and of Joshua Chamberlain. (Good speakers often make good book recommendations about heroes that don't wear capes.)
- 2008: I was the most junior officer speaking at a 2-day, PHS leadership training at AMSUS in San Antonio. I was nervous, so I bought and read several books during the preceding months. (One book, "*Leadership for Dummies*" explained that leadership was a combination and repetition of the following steps: 1. Elicit a spirit of cooperation towards a common goal; 2. Listen; and 3. Put the needs of others before yourself.)

RADM Edward Dieser asked me to say a few words about leadership when I received the RADM Villforth award. I spoke about effecting change. When I started my career, there were a lot of male officers with pony tails, beards and without uniforms. We only wore our uniforms on Wednesday and didn't have a field uniform. I think I went an entire year without donning a uniform because of field work, but I always wore PHS "pride apparel" on Wednesdays. I described how I lost about 50 pounds as a result of the new weight retention standard; in years to come, we will look back on these standards with satisfaction - knowing it was the right direction for our Corps. (If anyone is struggling with weight, and wants someone to talk to, feel free to call me.) I also mentioned that it is easy to be critical of leadership. One can be the President, Pope, or a PHS PAC subcommittee member and still be criticized. I paraphrased the quote from Theodore Roosevelt's 1908 speech about citizenship in Paris (often referred to as "[The Man in Arena](#)" or "It is not the critic who counts"):



CAPT Mix served twice as a COSTEP with Nashville Area IHS, and worked on the Navajo Nation for four years. He started with the EPA in Kansas City and has been with the EPA 22 years

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It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, and comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows the great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who know neither victory nor defeat.

RADM Richard F. Barror (ret.) started the 2008 leadership training in San Antonio by reminding us that "all leadership is temporary." He also once wrote as our Chief Engineer that leading is similar to being a turtle (paraphrasing): "Sometimes you have to stick your neck out (cautiously) to slowly move ahead." Mark Twain said "Twenty years from now, you will be more disappointed by the things you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Catch the trade winds in your sails." My challenge to you is: be diligent, take advantage of leadership opportunities, and don't worry about the critics.

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The Society of American Military Engineers 2019 Golden Eagles Dinner

On March 13, 2019, PHS engineers and other officers attended the [SAME Golden Eagles Dinner](#) (GED), in Herndon, VA. During dinner, PHS officers from the Surgeon General's Own played music. After playing, and while attendees finished their dinner and desert, SAME Executive Director, Brigadier General Joe Schroedel, PE, F. SAME (USA Ret.) presented LCDR James Coburn with a framed certificate of thanks for serving two years as the PHS Service Liaison Officer to SAME. Also at some point during the evening and on stage, BG Schroedel performed about 15 pushups with excellent form in his tuxedo, and shared some light-hearted stories drawn from 65 years of experience. The presentation of two Golden Eagle awards concluded the evening. Engineers are reminded to review the [Top 10 Reasons for Active SAME Membership](#). Engineers should also start planning now to attend the next Golden Eagle Dinner and SAME Centennial Celebration Gala at the Joint Engineering and Training



BG Joseph Schroedel and
LCDR James Coburn

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Conference, to be held jointly in Washington, DC in May 2020. The centennial [Run to 2020 and Beyond](#) is officially underway, and the PHS Engineer category will be participating!



PHS Musical Ensemble

Fun Facts: For formal events, the Dinner Dress Blue uniform is required for O-5 and above. O-4 and below may wear the modified version. The next GED will take place in Washington, DC and will be a part of the JETC Gala (May 2020), for the SAME Centennial Celebration. Order your Dinner Dress Blue uniforms now!



Engineers Pictured (L to R): CAPT Nelson Mix, F. SAME (EPA); CDR Brad Cunningham (FDA), LCDR James Coburn (FDA) LT Michael Simpson (FDA)

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APAOC Healthy Mind Initiative at the Philippine Embassy

*CAPT Marivic Fields, CDR Leo Angelo Gumapas,
and LCDR Nicole Pascua*

The Asian Pacific American Officer Committee (APAOC) Healthy Mind Initiative (HMI) is a collaborative effort among the U.S. Public Health Service (PHS), federal and county government partners, and Asian American Pacific Islander (AAPI) community organizations and leadership. It highlights the importance of mental health literacy by educating about mental illness, substance misuse, and suicide among AAPI youth, with a focus on prevention and early detection. HMI aims to increase awareness of mental health, reduce stigma and encourage AAPI parents and youth to seek help when needed. HMI provides education about AAPI adolescent mental health risks and early warning signs of disorders and ways to seek help; builds a collaboration among federal, county and community entities in which PHS officers serve; and scales this approach nationally with other ethnic groups drawing upon the breadth of PHS officer expertise.

On December 18, 2018, CAPT Marivic Fields, CDR Leo Angelo Gumapas, and LCDR Nicole Pascua made a HMI presentation to 43 Philippine Embassy employees at the Philippine Embassy in Washington, DC. The presentation was requested by the Philippine Embassy leadership following the National Forum on Filipino Mental Health on October 20, 2018.

The HMI presentation included two interactive sessions, one of which was adapted from a Mental Health First Aid training conducted by the Montgomery County Department of Health and Human Services Asian American Health Initiative. Activities included a role play exercise to illustrate signs and symptoms of schizophrenia and group discussions about the mental, physical, behavioral and emotional impacts of stress.



CAPT Marivic Fields, CDR Leo Angelo Gumapas, and LCDR Nicole Pascua posed for a picture with the Deputy Counsel and Ambassador of the Philippines

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As a token of appreciation, the Deputy Counsel and Ambassador of the Philippines to the US presented a Certificate of Appreciation to the HMI and invited CAPT Fields, CDR Gumapas, and LCDR Pascua to attend their holiday party, which included an array of catered Filipino foods ranging from main dishes such as pancit, lechon and lumpia, to deserts such as ube cupcakes and puto.



LCDR Nicole Pascua and CAPT Marivic Fields are presenting at the Philippine Embassy on December 18, 2018

To get involved with HMI, then please reach out to CDR Eric Zhou zhou@niaid.nih.gov or LCDR Xinzhi Zhang at xinzhi.zhang@nih.gov.

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CDR Varsha Savalia Recognized by SAME's Washington, DC Post

23rd Annual DC Post Awards Program – On January 17, 2019, at the National Press Club in Washington, DC, the Society of American Military Engineers (SAME) DC Post selected CDR Varsha Savalia (US Food and Drug Administration) to be the recipient of the *Outstanding Contributions to Technology or the Engineering Profession Award*. All SAME post awardees then compete against each other for SAME's *Technology Advancement Medal* awarded at the annual Joint Engineering and Training Conference in May 2019 in Tampa, FL.



CAPT Nelson Mix, CDR Varsha Savalia, and RADM Edward Dier at the 2019 SAME DC Post Awards Program

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The criteria for this award are:

- Initiative in advancement of existing engineering and related technology for the past three years;
- Demonstrated acceptance and application of technology by users;
- Demonstrated communication skills in technology advancement;
- Effective use of team work; and
- Cost savings and effectiveness of the technology.

From CDR Savalia's award narrative:

CDR Varsha Savalia supported a Presidentially mandated 'one-stop shop' for trade to provide essential data elements for importation and exportation to all federal agencies via a centralized system. Due to incompatibility between the IT systems of various agencies, inefficiencies have resulted in goods being held up for agency clearance. The complexity of this design assignment was enormous due to the different regulatory requirements of each federal agency, the large volume of goods, various types of products, and the required smooth transition for phase-out of an outdated system. CDR Savalia led the FDA Automated Commercial Environment (ACE) International Trade Data System (ITDS) deployment and implementation to process 11.2 million entries and 57.8 million lines of Medical Devices and Radiological Health Products. Medical Devices and Radiological Health Products are the largest volume, making up of more than 50%, of imports.

Under CDR Savalia's leadership, the Medical Devices and Radiological Health Products transmission functionality in the ACE system became a cornerstone of FDA's success in establishing a fully electronic "single-window portal" through which industry can submit all data required for international trade. This is the first time FDA worked to develop a centralized system for multi-agency use for receiving surveillance data and validating reporting requirements for enforcement action.

ACE provided a model for a comprehensive national surveillance system using a communal, multi-level tool for screening all FDA regulated import products. The result of this assignment is critical in developing import policies and procedures, and ensures the safety of Medical Devices and Radiological Health Products and all FDA regulated goods imported into the U.S. ACE allows the FDA to obtain more data quickly, process cargo more expeditiously, and ultimately uses resources to more effectively to target unsafe, dangerous, and high-risk shipments. CDR Savalia's efforts exemplify a willingness to take on additional responsibilities, duties and numerous leadership roles.

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Fair Winds and Following Seas

The EPAC would also like to recognize the engineer officers who have recently retired from Commissioned Corps service. The EPAC sincerely appreciates your leadership and dedication to the mission of PHS engineers.

Rank	Name	OPDIV
CAPT	Authur Anderson	Interior
CAPT	Daniel Beck	OS
CAPT	Stephen Bolan	IHS
CAPT	Derek Chambers	EPA
CAPT	James Cheng	FDA
CAPT	Steven Dykstra	IHS
CAPT	Cheryl Estill	CDC
CAPT	Marc Fleetwood	IHS
CAPT	William Griffith	IHS
CAPT	Leonila Hanley	EPA
CAPT	Kelly Hudson	NIH
CAPT	John Longstaff	IHS
CAPT	Adam Scully	FDA
CAPT	Patrick Stewart	IHS
CAPT	Anthony Zimmer	EPA
CDR	William Robberson	EPA
CDR	Kurt Sauers	IHS
CDR	Candace Tsingine	IHS
LCDR	Ryan Cole	IHS
LCDR	Thomas Lazo	IHS

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New Engineer Officers

The EPAC would like to acknowledge the following engineers who have recently become Commissioned Officers. The EPAC welcomes each of you and hopes you will enjoy a long and prosperous career in the PHS.

Rank	Name	OPDIV	City	State
LT	Angela Coulliette-Salmond	CDC	Atlanta	GA
LT	Brian Julius	IHS	Pierre	SD
LT	Matthew Chadwick	IHS	Ft. Duchesne	UT
LT	Sandra Miller	ATSDR	Atlanta	GA
LT	Rashele Moore	FDA	Silver Spring	MD
LT	Michelle Roy	IHS	Clovis	CA

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Dear Readers,

Machinatores Vitae (Engineering for Life) is a publication of the EPAC, but we need help in bringing you the information and stories that you want to read. Please consider submitting an article for an upcoming issue or let us know when you or a colleague have reached a milestone, been recognized for an accomplishment, or have an experience to share. If you are an accomplished writer, send something along that is already polished. If you don't feel like a Hemingway or Dickinson, just send enough detail so the writing team can take hold of it and build the story for you.

The writing staff can only see a bit of the big world that is public health engineering. There are numerous accomplishments even within our readership that remain unknown except in the relatively small circles around you. If you have not presented at a national meeting, the likelihood is that no one outside of your agency, or possibly even Office, ever heard about the project that you nearly exhausted yourself completing. Here is your chance to shine!

All ideas are welcomed. Remember that we do not have to solely focus on work going on within the PHS. Let us know if you hear of new technologies or applications, or just find an interesting story from the outside world. The rule of thumb is that if you as an engineer are interested in it, then others will be too!

Send your thoughts, suggestions, or a brief synopsis of a proposed article to the newsletter coordinator, LCDR Jason Petersen at Jason.Petersen@ihs.gov.

Thank you,

The Newsletter Team
EPAC Information Subcommittee

Machinatores Vitae is published twice annually and posted on the USPHS Engineer Professional Advisory Committee website. The deadline for submitting articles for the **Fall 2019** edition is **August 31, 2019**.