

MACHINATORES VITAE

Engineer and Architect Newsletter

From the Chief Engineer Officer



Randall J.F. Gardner, P.E.
Rear Admiral, US Public Health Service
Assistant Surgeon General

Spring 2014

Way to Go!

There are so many things I have to say and would like to accomplish in my four years as Chief Engineer. As Chief Engineer I see this as our time to make a difference in the Engineer category. I'm not going to write about leadership or my goals over the next few years, or about the legacy we stand upon. Instead I want to bring to you what I am thinking and where we might lead. I did not get to where I am by my own doing or by chance, and our future does not take a commendable form without our collective effort.

I will first address my view of our service, the Commissioned Corps of the United States Public Health Service. If you haven't noticed, there seems to be constant questions of who we are and what is our value. Those questions have been around since our beginning and have already been answered by our presence and our history. There are many examples: from solving public health problems, to mobilizing in response to emergencies, all of which can be read about. Like most situations, not everyone will be satisfied with the answers we give and many will disagree. Our uniformed service is current, flexible, and relevant; so we must move on.

Next, what each of us (PHS Commissioned Officers) does in our daily work and in our communities reflects on all of us. I enjoy talking about the strengths of our Public Health Engineer Corps (PHEC) as my collective view

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of the accomplishments achieved by approximately 460 active duty Engineer Officers and those that came before us. Obviously there are varying levels of achievement and performance, which brings me to the point. We need to individually outperform our own expectations to reach higher levels as the PHEC. Whether you are going on three years as an officer or approaching thirty, we need your knowledge and efforts to further strengthen our accomplished Corps. I am honored and proud to serve in the PHEC.

It is no accident that many engineer officers serve in multi-disciplinary leadership roles and strive outside of their trained disciplines. The PHS needs engineers to continue to step up and take on more and varying leadership assignments. As we determine which way to go with our careers we must continue with leadership, service, integrity, and excellence. Time will tell how our future unfolds as we reach and reform our path of goals by taking one step at a time.

I recall my initial reaction to my introduction to the PHS March. "Are you kidding me? What next, they'll want me to shave!" (lol) Now the entire song is a part of what I strive to achieve...The Public Health Service Team! Way to Go Engineers! Continue to Lead the Way!

Thank you for your service and I look forward to working with and for you.

Regards,

RADM Randall J.F. Gardner, P.E.
Chief Engineer, USPHS

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

EPAC	Point of Contact	Agency	e-mail
Chair	CDR Nathan Epling	NPS	Nathan_Epling@nps.gov
Subcommittees			
Rules (Chair-Elect)	CDR Jill Hammond	FDA	Jill.Hammond@fda.hhs.gov
Awards	LCDR QuynhNhu Nguyen	FDA	quynht.nguyen@fda.hhs.gov
Career Development	CDR Jill Hammond	FDA	Jill.Hammond@fda.hhs.gov
Deployment Preparedness	LCDR Kimberly Piermatteo	FDA	Kimberly.Piermatteo@fda.hhs.gov
Information	LCDR James Kohler	EPA	Kohler.James@epa.gov
Mentoring	CDR Duane Hammond	CDC	ahz0@cdc.gov
Public Health Engineer Practice	CDR Tanya Davis	IHS	Tanya.Davis@ihs.gov
Recruitment and Retention	CDR Robert Hemberger	NPS	robert_hemberger@partner.nps.gov
Special Events	LCDR Kurt Kesteloot	NPS	Kurt_Kesteloot@nps.gov
Executive Secretary	LCDR Frank Chua	IHS	Francis.chua@ihs.gov
EPAC Website			http://www.usphsengineers.org/

2014 EPAC Chair

CDR Nathan Epling

It is a great time to be serving in the U. S. Public Health Service and, even better, as a PHS Engineer. I extend a sincere welcome to all new engineers to PHS, whether as a commissioned officer or civil servant. You have embarked on a career full of potential adventure and professional success. While the EPAC can assist you in meeting the goals set before you, your career is ultimately your ship to steer. I recommend volunteering on EPAC subcommittees as a wonderful way to expand your leadership skills—please contact the chairs listed on our website to learn more about their work that may interest you: <http://www.usphsengineers.org/index.php/epac/subcommittees>



EPAC is once again off to a quick start on issues affecting many areas of our category:

- The Recruitment and Retention subcommittee assisted with the recruitment window DCCPR opened for engineers in January.
- A draft charter for the Information Technology Chartered Advisory Committee (ICAC) has been reviewed by our Information subcommittee.
- The Events Subcommittee assisted in coordinating this year's Awards Breakfast at the NIH campus in Bethesda, MD.
- EPAC members have reviewed the 2015 Engineer Benchmarks for submission to the Chief Engineer.

Upcoming work for EPAC in 2014 includes:

- Developing an updated communication strategy for EPAC that best advises and serves the Surgeon General and the PHS through the CPO, on issues relating to the professional practice and the personnel activities of PHS engineers.
- Advising on the impact of the recent "Minimum GPA" policy on Commissioned Corps engineer recruitment.
- Looking into expanding PHS engineer integration with *Engineers Without Borders*.

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My virtual door (nepling@nps.gov) is always open to anyone that has ideas, concerns or questions about these activities or other issues facing our category.

I want to recognize the new EPAC members that have volunteered their time and skills throughout their three-year term (2014-2016):

CDR Jill Hammond, FDA (2nd term member)
CDR Tanya Davis, IHS
LCDR Kevin Bingley, IHS
LCDR William Fraser, IHS
LCDR James Kohler, EPA
LT Shane Deckert, NIH
LT Matthew Hunt, NIH

I also wish to congratulate RADM Gardner on his selection as our Chief Engineer Officer. I have met RADM Gardner several times at our category functions and continue to be impressed by his accomplishments as an engineer and his experience as an officer. I look forward to working with him in maintaining our trajectory as the best category of officers in any uniformed service!

CDR Nathan Epling
2014 EPAC Chair
nepling@nps.gov

EPAC 2014 Agenda

EPAC General

- Develop an inclusive and efficient Communications Strategy
- Host meetings that expand the collaboration of subcommittee chairs, liaisons and all PHS engineers

Awards

- Increase awareness of EPAC awards nomination and review process with stakeholders within DHHS
- Increase quality of nomination write-ups
- Develop a minimum threshold a priori for awards that may have only one nomination
- Review and update award nomination forms and selection criteria as needed

Career Development

- Officer Basic Course Engineer Representative
- Conduct “CV Review” webinar with a panel of senior officers from various agencies
- Career Development Handbook update
- Agency Transfer Factsheet

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Deployment Readiness

- Engineer Assessment Guide– Maintain, review, update if needed
- Engineer Category Survey– Maintain, review, prepare for data collection next year
- Identify and develop strategies/programs to address Engineer and Corps-wide Readiness issues
- Promote Physical Fitness

Events

- February 20- Engineer Awards Breakfast & NSPE Luncheon
- May 20-23: SAME JETC Conference
- June 10-12: USPHS Scientific & Training Symposium
- December 2-5: AMSUS Conference
- Provide USPHS engineers coins and work on SOP for the EPAC COF account

Information

- Maintain and update www.usphsengineers.org. Please send any new requests for content, updates, or corrections to: postings@usphsengineers.org
- Transition from quarterly to Spring/Fall to coincide with the Combined Category Newsletter schedule of Summer/Winter
- Modify the newsletter to improve information dissemination and ensure the newsletter is meeting the needs of the EPAC
- The engineer category centennial website project
- Advise the category on the use of social media as appropriate

Mentoring

- EPAC mentoring program evaluation
- EPAC mentoring event at COF training symposium
- Improve guidance for IAP/IDP template
- Body of knowledge (slides and study book)
- Contact all new call-to-active-duty engineers in 2014 and offer to pair with an engineering mentor

Public Health Engineering Practice

Focus areas to develop a factsheet/paper by the end of the year:

- Sanitation
- Biomedical and Food
- Safety- occupational or consumer including construction safety; building and infrastructure safety; air and noise pollution
- Outreach- Community service opportunities relating to engineering education or assistance to underserved populations

Recruitment and Retention

- Commissioned Officer Student Training and Extern Program (COSTEP) mentoring
- Outreach and promotion of the engineering profession to high school and middle school students
- Update Engineer Vacancy List and Best Kept Secrets
- DCCPR will submit a list of boarded engineering applicants where we can further assist these applicants to find positions

2014 Engineer Category Awards Breakfast

LT Diana Wong, Ph.D.

CAPTAIN GARDNER BECOMES REAR ADMIRAL

Bethesda, M.D. – In a career spanning nearly three decades, CAPT Randall J. F. Gardner was promoted to Rear Admiral on November 14, 2013 to be the 13th Chief Engineer. With his supportive family at his side, RADM Gardner's rank was made official during his pinning ceremony on February 20, 2014 at the National Institutes of Health, Cloister Building.

"He selected and has a lot of faith in you and puts a lot of weight on your shoulders," said RADM Scott Giberson on behalf of Acting Surgeon General RADM Boris Lushniak, in describing how both admirals were highly confident of RADM Gardner's abilities to fulfill his new duties. RADM Giberson spoke of RADM Gardner's support when he had become Chief Pharmacist before and found it befitting that he return the sentiment.

After his daughter changed out a new shoulder board and his son helped him into his newly striped coat, RADM Gardner said, "I've had a lot of support. It's apparent, because I'm here." In his first public address as a flag rank officer, he mentioned very little about himself but instead showered accolades and appreciation for his family, including his stepmother, wife, children, nephew, and brother.

In his humble and succinct way, RADM Gardner continued to acknowledge those who work for the nation. "A lot of times when we're in uniform we say we're in the service—but anybody who works in the Federal sector is in the service... I'm here as a servant. The opportunity to serve my category is the greatest honor I can have as an engineer."



RADM Gardner's shoulder boards are changed by his daughter, Ms. Amanda Gardner, and RADM Gary Hartz (Ret.)

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CATEGORY PRESENTATIONS AND AWARDS

CDR Nathan Epling introduced several speakers who paid homage to the accomplishments of engineers in improving public health.

LCDR Leo Gumapas and LT John Pesce challenged PHS officers to take an active role in promoting healthy living, particularly in the context of the 2012 National Prevention Strategy (NPS) to promote healthy living. With a widespread and talented network of PHS officers, the two officers have formed Prevention through Active Community Engagement (PACE). PACE provides a conduit for PHS officers to educate children at schools and they are looking for new ideas and volunteers.

Mr. Dan Wheeland, Director of the Office of Research Facilities at NIH, gave the keynote address. He proved that engineers do indeed have a sense of humor, recalling his time as an ROTC cadet and joking about the differences between the PHS and Navy. Mr. Wheeland enthusiastically praised the achievements of RADM Gardner as well as other PHS officers (including a number of junior officers in the room) who have successfully executed key projects at the NIH.

Following the presentations, RADM Gardner and CDR Epling presented this year's awards to the following recipients:

CDR Ed Zechmann, P.E.	PHS Engineer of the Year
CDR Jill Hammond, MPH	RADM Jerrold M. Michael Award
Mehrar Ebrahimi, P.E.	NIH Engineer of the Year
Wilbert Smith, P.E.	FDA Engineer of the Year
LT Griff Miller, EIT	EPA Engineer of the Year
CDR Ed Zechmann, P.E.	CDC Engineer of the Year
CDR Ross Schroeder, P.E.	IHS Engineer of the Year
LCDR Jon Bergeron, P.E.	NPS Engineer of the Year (Commissioned Corps)
James Boisseau, P.E.	NPS Engineer of the Year (Civil Service)
CDR Jennifer Caparoso, P.E.	US Army Public Health Command Region Engineer



2014 Engineer Category Awardees with RADM Gardner: left to right: LCDR Jon Bergeron, P.E., Wilbert Smith, P.E., RADM Gardner, CDR Jill Hammond, MPH, Mehryar Ebrahimi, P.E., CDR Ed Zechmann, P.E.

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LTJG Ariell Lawrence (most junior officer) and RADM Gardner cut his congratulatory cake



Engineer Breakfast and Ceremony Volunteers: (left to right) LT Shane Deckert, LT Matthew Hunt, LCDR Leo Gumapas (event director), LTJG Ariell Lawrence, RADM Gardner, LT Diana Wong, LT Corey Cosgrove, LT Phoung Vo

The USPHS Engineer Category Awards Breakfast was made possible in part by the generous support of the District of Columbia Commissioned Officer Association (DC COA). Links to additional photographs and videos from the event are available on the EPAC website: <http://www.usphsengineers.org/index.php/photos-videos>

Engineers in Action – Spotlight on NIOSH Engineers

The EPAC Information Subcommittee is working to develop a digital photograph gallery of PHS Engineers in action to help illustrate the roles that we play in protecting and advancing the health of the nation. Officers are encouraged to share images to help increase visibility and public awareness of what we do. Images and captions can be emailed to postings@usphsengineers.org. A picture is worth a thousand words!

In the images below, engineers at the National Institute for Occupational Safety and Health (NIOSH) conduct research and analysis of occupational hazards.



LCDR Deborah Hirst prepares an environmental chamber for use during testing of Closed System Drug Transfer Devices.



LCDR Hirst assembles a HEPA-filtered wind tunnel as part of the NIOSH hazardous drug filtration research protocol.



LCDR Hirst demonstrates the dosing technique used to apply aerosolized hazardous drug onto the surface of a HEPA filter.

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CAPTs Chuck Kardous and Bill Murphy conducting a noise assessment at an Air Force indoor firing range (left)

CAPT Bill Murphy conducting a noise assessment at the Marine Corps Air Station Miramar (right)



CAPT Chuck Kardous overseeing a noise assessment at Marine Corps Air Station Miramar (left)

Meet an EPAC Member

These voting members joined the EPAC in 2014...



LCDR Kevin Bingley

LCDR Bingley is currently the Deputy Director of the Division of Sanitation Facilities Construction (SFC) in the Office of Environmental Health and Engineering in the Alaska Area Indian Health Service (IHS). LCDR Bingley has previously served with SFC in the Reno District of the Phoenix Area IHS and overseas with the US Peace Corps. During his time with the IHS, LCDR Bingley has participated in numerous IHS and PHS workgroups including three SFC/IHS Strategic Plan Vision Element workgroups, the PHS Awards, Recognition, and Retention Working Group, the PHS Accountability Workgroup, the EPAC Awards subcommittee, the EPAC Deployment Preparedness subcommittee, and the PHS

Uniform Advisory Committee. LCDR Bingley is currently serving as the Operations Chief for the National Incident Support Team E (NIST-E) and has deployed to Timor-Leste with the Pacific Partnership and to New York for Hurricane Sandy. LCDR Bingley has a Bachelor of Science degree in Civil Engineering from Virginia Tech, a Master of Science degree in Civil and Environmental Engineering from Stanford University, a Master of Public Health degree from Johns Hopkins University, and a Certificate in Global Health from Johns Hopkins University. Additionally, LCDR Bingley is a licensed Professional Engineer in Virginia and Certified in Public Health.

CDR Tanya Davis

CDR Davis is an environmental engineer with the Indian Health Service in Tucson, Arizona, where she has worked for the last 6 years. One of her primary roles is to run the modular bathroom program. In 1997, CDR Davis received a Bachelor of Science degree in Environmental Engineering from New Mexico Tech. Following her undergraduate work, Tanya joined the US Peace Corps where she worked as a water and sanitation volunteer in El Salvador for two years. In 2000, CDR Davis moved to Austin, Texas, where she pursued a Master of Science degree in Environmental and Water Resources Engineering from the University of Texas at Austin. In 2002, upon completing her graduate work, CDR Davis joined Malcolm Pirmie in Tucson, Arizona, where she worked for four years. Between jobs, CDR Davis served as a Peace Corps Response Volunteer in Venezuela and Sri Lanka, and most recently as a United Nations Volunteer in South Africa. Since joining the Indian Health Service, CDR Davis has furthered her education in Public Health by completing a Graduate Certificate in Public Health from the University of Arizona in 2012.



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**LT Shane Deckert**

LT Deckert earned his Bachelor of Science degree in Civil Engineering from the University of Portland, Oregon, with a minor in Spanish Language, and his Masters of Business Administration from Strayer University, Alexandria, VA. He has been at the National Institutes of Health for approximately two years, and in November, 2011, he deployed in support of the Hurricane Sandy disaster relief. He is currently a Project Officer and the Resident Transportation Engineer for the Capital Projects Branch in the Division of Design and Construction Management under the Office of Research Facilities. LT Deckert is responsible for managing many multi-million dollar laboratory construction projects for future research by the 27 Institutes at the NIH. His previous work experience includes multiple intern-

ships for the Portland Department of Transportation throughout his college career and four years as a Civil Engineering Officer in the US Air Force with a one-year deployment to Iraq in an effort to rebuild the country in 2008. LT Deckert is a registered Professional Engineer in Washington, DC, as well as a LEED Green Associate.

LT Matthew Hunt

LT Hunt earned a Bachelor of Science degree in Civil Engineering from the University of North Carolina at Charlotte in Charlotte, NC. He has been at the National Institutes of Health for approximately one year. He works as an environmental engineer with the Sustainability Branch, Division of Environmental Protection, under the Office of Research Facilities. LT Hunt's main responsibilities are to support NIH in implementing more sustainable practices to meet the requirements of Executive Orders 13423 and 13514. His previous work experience includes two years working with the Food and Drug Administration as an Investigator focusing on medical device and drug manufacturing facilities. For three years prior to that, he was employed with the Indian Health Service as an environmental engineer and was responsible for managing water and wastewater construction projects on the Navajo Reservation, in Chinle, AZ.



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**LCDR James Kohler**

LCDR Kohler has served as an environmental engineer for the past eight years with the U.S. Environmental Protection Agency. Currently, he serves as a subject matter expert in engineering and physical science for EPA's Office of Inspector General. In the past, he was a regulation writer who worked on developing air emission standards for hazardous waste combustors and on new federal regulations to address risks from the disposal of coal ash generated by the nation's 500 coal-fired power plants. The work included a nationwide structural integrity assessment of coal ash management units. Prior positions at the EPA have also included providing technical assistance to industry to reduce persistent, bioaccumulative, and toxic chemicals in their products and operations.

At his previous assignment with the Indian Health Service, LCDR Kohler was a project manager for the design and construction of sanitation facilities on the Navajo Indian Reservation. Before joining the Commissioned Corps, LCDR Kohler conducted energy efficiency and waste flow audits of mid-sized manufacturing firms in the Pacific Northwest for the U. S. Department of Energy. LCDR Kohler holds Bachelor of Science degrees in Environmental Engineering and Environmental Science from Oregon State University and a Master of Public Administration degree from the University of Oklahoma. He is also a licensed Professional Engineer in California.

Headlines from Around the Web - *The Military Engineer*

Recent articles by fellow PHS Engineers:

Water for Life - By CAPT Michael A. Stover, P.E., R.S., USPHS

A U.S. Public Health Service engineer traveled to El Salvador and served as professional lead, designer and technical mentor for a project to provide safe drinking water to the small community of Santa Clara. <http://themilitaryengineer.com/index.php/tme-articles/tme-online-exclusive-articles/item/280-water-for-life>

Energy Solutions for Rural Alaska Water Systems - By CAPT Dan Reitz, P.E., USPHS (RET.), and MAJ Chris Mercer, P.E., CEA, M.SAME, ANG

Due to extreme cold, challenging topography and limited infrastructure, energy costs to operate and maintain water and sewer systems in rural Alaska are significantly higher than the Lower 48 states. <http://themilitaryengineer.com/index.php/tme-articles/tme-magazine-online/item/270-energy-solutions-for-rural-alaska-water-systems>

New Engineer Officers

The EPAC would like to acknowledge the following engineer officers who were commissioned between August 2013 and February 2014. 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	KENNETH CHEN	FDA/CDRH	Silver Spring	MD
LT	JAMES COBURN	FDA/CDRH	Silver Spring	MD
LCDR	SAMUEL RUSSELL	DOI/NPS	Washington	DC
LT	PHUONG VO	NIH	Bethesda	MD

Fair Winds and Following Seas

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

Rank	Name	OPDIV
CDR	GEOFFREY WACHS	IHS
CAPT	PAUL RITZ	OS
CAPT	MATTHEW DIXON	IHS
CDR	LORETTA BARRANGER	IHS
CDR	KENNETH ESPLIN	EPA
CAPT	RUSSEL PEDERSON	IHS
CAPT	JAMES COLLINS	CDC
CAPT	JAMES FOTO	HRSA
CDR	KEITH FOY	FDA
CAPT	DANIEL REITZ	IHS
CAPT	CRAIG LARSON	IHS
CDR	DAN BOCCIA	IHS
CAPT	GEORGE PRINGLE	IHS
CDR	PATRICK CRANEY	IHS
RADM	SVEN RODENBECK	ATSDR
CAPT	PAULA SIMENAUER	FDA
CDR	MARK GRESKEVITCH	CDC
CAPT	CAROLE BOERNER	IHS
CAPT	DAVID AUSDEMORE	CDC
CAPT	THOMAS HEINTZMAN	IHS
CDR	JACQUELINE PARKER	IHS
CDR	THOMAS GAULKE	IHS

Dear Readers,

The *Machinatores Vitae* newsletter 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 your pet 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 editors at epac@usphsengineers.org.

Thank you,

EPAC Newsletter Team

The *Machinatores Vitae* is published twice annually and posted on the USPHS Engineer Professional Advisory Committee website. The deadline for submitting articles for the Fall 2014 edition is **August 30, 2014**.