

MACHINATORES VITAE

Engineer and Architect Newsletter

From the Chief Engineer Officer



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Rear Admiral, US Public Health Service
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January 2012

INSIDE THIS ISSUE:

<i>Message From the Chief</i>	1
<i>EPAC Chair Update</i>	5
<i>PHS Engineers Respond to Hurricane Irene</i>	7
<i>Engineer Category Day at USPHS Scientific Training</i>	9
<i>PHS Engineer Statistics</i>	10
<i>New Engineer Officers</i>	12

We Are Prevention!

On 16 June 2011, the National Prevention, Health Promotion, and Public Health Council, chaired by Surgeon General Regina Benjamin, released the [National Prevention Strategy](#). The Council is composed of senior government officials across federal departments and agencies (e.g., Secretary of Health and Human Services, Secretary of Labor, Secretary of Homeland Security) who consulted with outside experts and stakeholders. The Strategy is the comprehensive plan that will help increase the number of Americans who are healthy at every stage of life and recognizes that good health comes not just from receiving quality medical care, but also from clean air and water, safe outdoor spaces for physical activity, safe worksites, healthy foods, violence-free environments and healthy homes. In particular, the Strategy highlights how prevention should be woven into all aspects of our lives, including where and how we live, learn, work and play. Everyone—businesses, educators, health care institutions, government, communities and every single American—has a role in creating a healthier nation.

The National Prevention Strategy includes actions that public and private partners can take to help Americans stay healthy and fit and improve our nation's prosperity. As highlighted in the figure above, the Strategy has four

(Continued on page 2)



strategic directions that, together, are fundamental to improving the nation's health. Those four strategic directions are:

- **Healthy and Safe Community Environments:** Prevention of disease starts in our communities and at home; not just in the doctor's office.
- **Clinical and Community Preventive Services:** When people receive preventive care, such as immunizations and cancer screenings, they have better health and lower health care costs.
- **Empowering People:** When people have access to actionable and easy-to-understand information and resources, they are empowered to make healthier choices.
- **Eliminating Health Disparities:** By eliminating disparities in achieving and maintaining health, we can help improve quality of life for all Americans.

12th PHS Chief Engineer Goals

Reflect upon our past accomplishments as we prepare for our 100th Anniversary as a category;

Renew our efforts to recruit even more engineers and architects and advance the engineering and architectural sciences; and

Respond to the ever changing health needs of our country.



(Continued on page 3)



Engineer and architectural activities and services are key to the successful implementation of the four strategic directions. It is also interesting to note that registration as a “Professional Engineer” and “Registered Architects” is done to ensure that the public’s health, welfare, safety, and property are protected; which of course leads to prevention of disease and unintentional injury.

Here are just a few highlights of what we have and will do in support of the four strategic directions:

- Prevent and control the spread of disease by installing water treatment and delivery systems and wastewater collection, treatment, and disposal systems for underserved populations.
- Conduct research and evaluations to reduce workers' exposures to occupational safety and health hazards.
- Evaluate medical devices of varying risk and electronic products at Federal testing facilities and inspect domestic and international facilities where these products are manufactured.
- Regulate the environmental impacts resulting from activities of industry and State/local government.
- Support the Family Smoking Prevention and Tobacco Control Act by setting performance standards and regulating tobacco products and manufacturers.
- Provide guidance on designing, constructing, and operating "healthy buildings."
- Provide facilities management, planning, and construction services for preventive and health care delivery facilities and laboratory research complexes.
- Identify, assess, and evaluate the health risks associated with hazardous waste sites, unplanned releases of hazardous substances, and environmental contamination or pollution, and help prevent or reduce further exposure and resulting illnesses.
- Maintain a mobile engineering force to respond to natural and man-made disasters.
- Promote, advocate, and empower individuals, tribes and communities in public health affairs

To further delineate how we have and will continue to support the National Prevention Strategy; the Engineer Professional Advisory Committee (EPAC) is drafting an Engineer and Architect specific strategy that links to each of the four National Strategic Directions. The Engineer and Architect Strategy will also assist us as we begin planning for our 2013 Centennial Celebration as a US Public Health Service Category. During our Centennial Year we will be highlighting not only our accomplishments, but also how we will continue to protect, promote and advance the health and safety of our Nation.

You will have an opportunity to review and comment on our draft strategy. You can also help with preparations for our Centennial by joining the EPAC Special Events Subcommittee. Please contact LT Kurt Kesteloot (see below) to join the planning team.

I would also encourage you to help spread the word on how engineers and architects protect, promote, and advance the health and safety of our Nation. We are major contributors to health prevention.

Machinatores Vitae!!
(Engineering for Life)



To get involved with Engineer Professional Advisory Committee (EPAC) activities, feel free to contact any of the following EPAC members.

EPAC	Point of Contact	Agency	e-mail
Chair	CDR Ed Dieser	CDC	edieser@cdc.gov
Subcommittees			
Rules (Chair-Elect)	CDR Ramsey Hawasley	IHS	ramsey.hawasly@ihs.hhs.gov
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Deployment Preparedness	CDR Ken Sun	CMS	kenneth.sun@cms.hhs.gov
Information	CAPT Eric Shih	OS	Eric.Shih@hhs.gov
Mentoring	vacant		-
Public Health Eng Practices	vacant		-
Recruitment and Retention	LCDR Kimberly Love	FDA	Kimberly.Love@fda.hhs.gov
Special Events	LT Kurt Kesteloot	NPS	Kurt_Kesteloot@nps.gov

EPAC Website

<http://www.usphsengineers.org/>



2011 and 2012 EPAC Chairs

From the outgoing Chair, CAPT Peter Nachod

Wow.....2011 went by extremely fast and we're already into the new year! It seems like it was just yesterday that I was pondering whether or not to self-nominate for the Chair position of EPAC, when in reality that was over two years ago! I am going to keep this, my final article for the newsletter, brief.



First off, I want to extend my thanks to each and every engineer (and architect) throughout USPHS for all of their hard work in supporting the overall mission of HHS. The mission of the Department is to enhance the health and well-being of Americans by providing for effective health and human services and by fostering strong, sustained advances in the sciences, underlying medicine, public health, and social services. I think it is safe to say that our category certainly fulfills the mission every single day that we are out there doing what we do. Sometimes we can lose focus and forget our mission. At the Department, the number one priority is to protect the health of all Americans and provide essential human services, especially for those who are least able to help themselves. So I want to ask everyone to take an opportunity to reflect on our mission and think about those who we are working so hard to help.

Our subcommittees once again (and not one bit surprisingly) had a productive year tackling many new initiatives such as the Engineer Category National Prevention Strategy (led by CAPT James Ludington) and Engineer Placement Assistance Program (led by LCDR Kimberly Love, LCDR Bret Nickels, and CAPT Charles Weir). Thanks to each of our Subcommittee Chairs and the members for their efforts given! It is greatly appreciated. Also, the Engineer Category was the first to complete the category specific Billet transformation! Hoorah!

Thank you to each one of our outgoing EPAC members for your service to the category. These members include CDR Jennifer Proctor (NPS), LCDR Vivian Porter (CDC), and LCDR Varsha Savalia (FDA). Each of you has given countless hours to EPAC in a common goal of helping and assisting your fellow engineers (and architects). We will miss the leadership you provided to your respective subcommittees. Thanks to our newest incoming members who volunteered and willingly chose to give the next 3 years of their "free time" to EPAC. Please welcome our new voting members for 2012: LT Kurt Kesteloot (NPS), LT QuynhNhu Nguyen (FDA), LCDR Weston Kenney (IHS) and Mr. Steven Schelske (IHS).

I want to also extend a personal thanks to LCDR Jill Hammond. LCDR Hammond has represented the Engineer Category with diligence, honor and great pride at every single Officer Basic Candidate course held this year. She, along with LCDR Ryan Costello, oversaw the Engineer Week Breakfast Ceremony held annually here in the DC Metro area. This event was a great success! Jill also led the New Engineers Conference call held a several months ago. If you are fortunate enough to know Jill, then this shouldn't surprise you since you know how much of a hard charger she is! Officers like LCDR Hammond represent the future of the engineer category and will be the ones who lead this category as a whole.

(Continued on page 6)



Finally, I want to thank RADM Rodenbeck for his guidance and support over this past year. RADM Rodenbeck has always been available for me when I needed to bounce thoughts off of him. He has always been one to give me honest feedback when needed. I have learned much from you over the course of the past year. I want to also thank several of the past EPAC Chairs (CDR Mosser, CAPT Longstaff, CAPT Ludington, CAPT Scharen, CAPT Gardner, and RADM Hartz) for your support and help along the way.

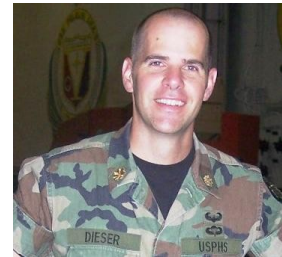
You have all provided me with more than each you probably realize and for that I thank you for making my year as Chair a memorable one; one that I will never forget and that says something, because if you know me.....I forget LOTS of things!

I have handed over the reins to CDR Ed Dieser, and stepping into his shoes as Chair Elect will be CDR Ramsey Hawasly. I have full confidence in their ability to lead you through 2012. Rest assured you are all in good hands with these two at the helm. Although I will no longer be Chair of EPAC, I will still be sticking around for one more year in an Ex-Officio role.

In closing, I hope that 2012 will be a prosperous and fulfilling year for all of us! Machinatores Vitae!

v/r
Peter

And a word from the incoming Chair, CDR Ed Dieser



Similar to CAPT Nachod, I too am stunned by the speed at which 2011 has come and gone. CAPT Nachod comments covered all points - I'd like to add three more from my perspective.

1. **All engineers - I challenge all of you to improve yourself in 2012** - in multiple areas or in a single area. Get more involved in COA or EPAC activities. Get more involved with your community - coach, volunteer. Get more involved with your family - vacation, really watch your kids, set quiet time aside for you and your significant other. Get more involved in your faith - pray, meditate. Get more involved in your own success - take a class, read, stay current. Get more involved in our mission - challenge yourself daily, be prepared to deploy, do the best that you can.
2. **EPAC members – I challenge you to improve the Category in 2012** – we have established a sound foundation from which to move ahead. And lest I forget – Thank you for what you have and will accomplish.
3. **CAPT Nachod – I challenge you to Help Me in 2012!** All humor aside: CAPT Nachod, thank you for your service, guidance and leadership as the EPAC Chair in 2011. The Category is better for it. I look forward to working with you in 2012 as I have last year. Thank you, too, for your confidence in Ramsey and me; we have a challenge ahead.

And so it begins...



PHS Engineers Respond to Hurricane Irene

After Hurricane Irene made landfall on August 27th, 2011, the east coast experienced record floods, widespread power outages and billions of dollars in property damage. The Public Health Service quickly activated Regional Incident Support Teams (RIST) and Rapid Deployment Force #3 (RDF-3) as part of the National Response Framework's ESF-8 public health and medical asset provisions. A number of PHS engineers were called into support roles for various PHS and OPDIV-specific missions in response to this natural disaster.



NASA Image of Hurricane Irene at 10:10 am on Saturday, August 27, 2011. The storm made landfall at 8:00 am Saturday at the Cape Lookout National Seashore. <http://www.nps.gov/cal/naturescience/hurricane-irene.htm>

As the Deputy Team Lead for RIST National Capital Region (NCR), CAPT Nathan Tatum was tasked with team preparation and deployment coordination and was also deployed as a Liaison Officer (LNO) to the District of Columbia Homeland Security Emergency Management Agency Center (HSEMAC). For the week preceding the landfall of Irene, he managed team availability and negotiated mission parameters with the NCR ESF-8 Regional Emergency Coordinator. In his capacity as LNO, he worked 12-hour shifts coordinating operational information relevant to ESF#8 for the NCR. After the incident, CAPT Tatum continued to work with the RIST to identify lessons learned and craft future training plans accordingly.

(Continued on page 8)



Prior to landfall, LCDR Nathan Epling led the pre-staging of RDF-3's Preventive Medicine Branch (or Prevmed), a multi-disciplinary unit that supports the non-clinical functions of a Federal Medical Station (FMS). While on standby in East Windsor, CT, RDF-3 worked with their co-staged HHS partners, DMATs and IRCT for training and collaboration on future disaster planning at the nearby Mobilization (or "MOB") center staffed by ASPR/NDMS. The National Guard in Hartford, CT provided MOB center classrooms for "just-in-time" training (JIT) with DMATs. Prevmed joined in this JIT- reviewing FMS composition, practicing with electronic medical record systems, and even an FMS stand-up exercise. Additionally, Prevmed developed an Environmental Health Strike Team Operations Plan for states to reference as needed.

Meanwhile, LT Kurt Kesteloot supported the National Park Service (NPS) Midwest Region (MWR) Incident Management Team (IMT) in Harkers Island, NC, where he served as Safety Officer for response activities at the Cape Lookout National Seashore. LT Kesteloot was responsible for monitoring safe work practices and identifying risks and hazards associated with the response operation and inspection of park water and wastewater facility resources. This included environmental hazards (mosquitoes, ticks, mold, standing water), hazard trees (live and dead), driving and traffic hazards, boating operations, ATV operations, footing and unstable ground caused by erosion and undercut banks, water crossings, drinking water contamination, and flood debris hazards including septic and bio-hazard exposure. Other major concerns included afternoon thunderstorms, lightning and severe weather warnings. The team operated on the National Incident Management System (NIMS) and Incident Command Structure (ICS). Current information on recovery efforts at the Cape Lookout National Seashore is available at: <http://www.nps.gov/cal/naturescience/hurricane-irene.htm>



Aerial view of sand and debris displaced by Hurricane Irene at Long Point on Cape Lookout National Seashore.

The EPAC would like to thank these officers for their hard work and for sharing their stories that highlight the diverse and important roles that PHS engineers play in national response and recovery efforts.



Get Involved in the Engineer Category Day at the USPHS Scientific Training

The Engineer Category USPHS Scientific Training Symposium committee works throughout the year to develop a one day agenda that allows an opportunity for engineers to earn continuing education credits and learn the fascinating work their colleagues are doing. The day also allows everyone an opportunity to network with one another and build career or lifelong friendships that helps keep the USPHS Commissioned Corps strong. The committee is looking for volunteers to help with:

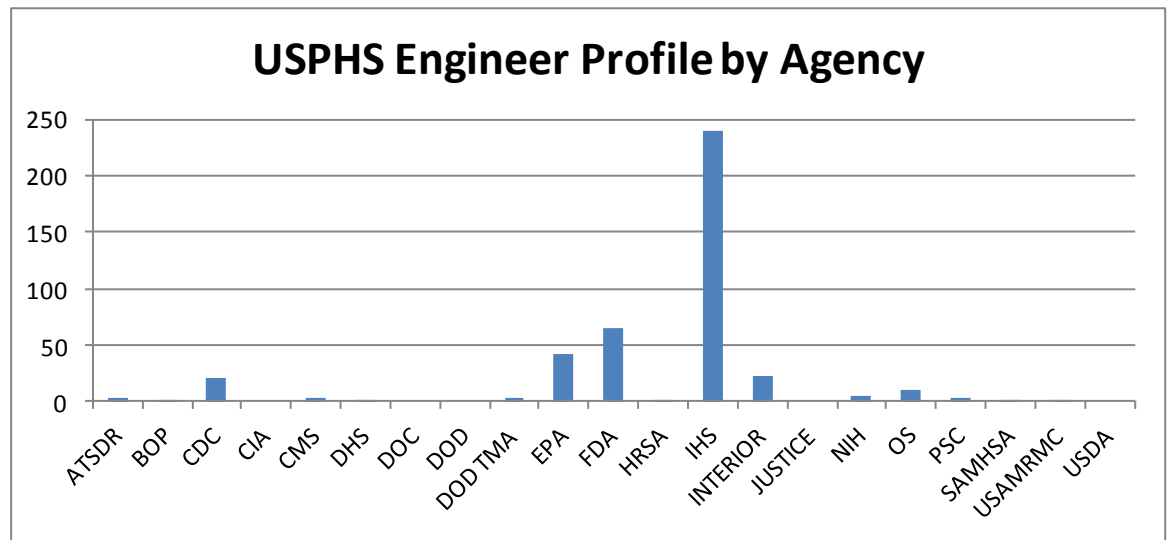
- Engineer Category Day Theme Development
- Presentations Submissions and Selections
- Keynote Speaker Search/Support/Budget
- Agenda Preparation
- Venue Preparation (obtain and bring flags to Category Day (logistics))
- Awards Ceremony Preparation (this person must attend Engineer Category Day)
- Event Publicity/Flyer
- Engineer Category Day Booklet Editing/Printing (preferably someone local or near New Orleans to print booklets and bring to conference)
- Presenter Supports (assure everything is complete and that the presenter plans to attend Engineer Category Day)
- Engineer Category Day Room Moderator and four session moderators (must attend)
- Recruitment for manning the engineer booth (attendance preferred)
- Surgeon General mini agenda preparation and coordination (must be five well-planned minutes)
- Meet and greet session planner (develop an ice breaker event)
- COSTEP/Local Engineering Student Recruitment for attendance
- As of 2011 – The Order of The Engineer ceremony.

The USPHS Scientific and Training Symposium is funded in part by the Commissioned Officers Association (COA) and Commissioned Officer's Foundation (COF). The conference typically brings more than 1,000 public health providers and administrators for continuing education seminars on the latest trends and innovations in public health care delivery, administration and research. The attendance for Engineer category day has reached up to 40 attendees in the last few years. More information about the general conference can be found at www.phscofevents.org.

The 2012 USPHS Scientific and Training Symposium will be held June 19-21 at the University of Maryland, College Park, in the Washington, DC metropolitan area. The theme for the conference is "Prevention Strategies for a Healthy Nation: Building on the Basics of Public Health." If you can donate your time to help plan this year's category day, please contact LT Kurt Kesteloot at kurt_kesteloot@nps.gov.



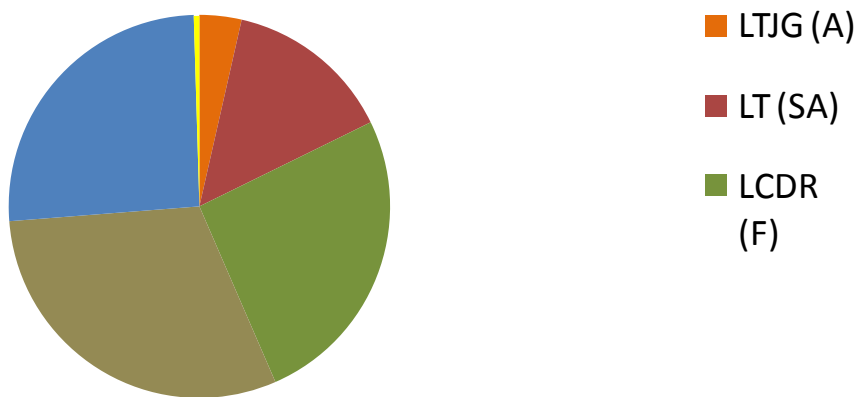
PHS Engineer Statistics



	DEN	DIET	EHO	ENG	HSO	MED	NURSE	PHARM	SCI	THER	VET	Grand Total
ACF					3		1					4
AHRQ					2	3		1	1		1	8
ATSDR	1		18	3	6	1	1		6		1	37
BOP	67	6	2	1	193	18	330	142	14	33		806
CDC	7	4	69	21	124	402	45	21	135	5	43	876
CIA					1							1
CMS	1	2		3	32	5	37	20		9		109
DHS	71	1	23	2	74	75	182	32	2	3	1	466
DOC					8		8					16
DOD									2		1	3
DOD TMA	2	1	2	3	116	19	53	10	39	12		257
EPA			17	41	9		1		6		4	78
FDA	3	25	86	64	171	42	151	326	71	6	14	959
HRSA	13	6	5	2	86	27	59	13	5	3		219
IHS	151	45	98	239	258	151	506	526	7	67		2048
INTERIOR			13	23	9	2	2		1			50
JUSTICE					1	2	10					13
NIH	2	5	10	5	31	100	99	14	22	5	18	311
OS	4	2	10	10	66	20	49	12	6	6	1	186
PSC	1	2	9	3	13	6	19	1	1			55
SAMHSA				1	37	1	7	5	2	1		54
USAMRMC				2	1				1			4
USDA		1	4		7	1				1	6	20
Grand Total	323	100	366	423	1248	875	1560	1123	321	151	90	6580



USPHS Engineer Profile by Rank



	ENS (JA)	LTJG (A)	LT (SA)	LCDR (F)	CDR (SR)	CAPT/DIR	RADM/ASG	RADM/ASG	SURGEN	Grand Total
DEN			18	40	72	190	2	1		323
DIET		1	15	26	25	33				100
EHO		19	67	84	87	106	3			366
ENG		15	60	109	128	109	2			423
HSO	39	48	257	477	275	149	3			1248
MED			41	150	191	478	9	5	1	875
NURSE		119	208	481	469	278	4	1		1560
PHARM			241	353	327	200	1	1		1123
SCI			36	105	70	109	1			321
THER			14	56	54	26	1			151
VET			5	25	16	42	1	1		90
Grand Total	39	202	962	1906	1714	1720	27	9	1	6580



New Engineer Officers

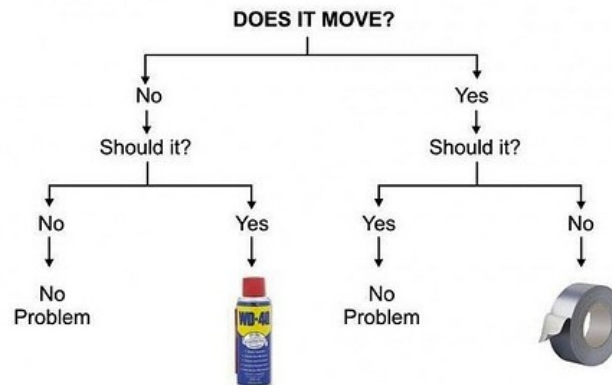
The EPAC would like to acknowledge the following engineer officers who were commissioned between January and September 2011. The EPAC welcomes each of you and hopes you will enjoy a long and prosperous career in the PHS.

Rank	Name	OPDIV	Location
LCDR	Brian Bearden	EPA	Saipan, MP
LT	Stanley Eugene	FDA	Portland, OR
LCDR	Thomas Armitage	IHS	Atmore, AL
LT	Sayward Fehrman	IHS	Anchorage, AK
LT	Maxwell Goggin-Kehm	IHS	Anchorage, AK
LTJG	Christopher Peltier	IHS	Minot, SD

To those who are new to the Corps, and those who have been around for a while, please take some time to review the information available on EPAC website at www.usphsengineers.org. The website has a new look, thanks to the hard work of CDR Ramsey Hawasly and the Content Management working group of the Information Subcommittee. Comments and suggestions can be submitted to: webmaster@usphsengineers.org.

Laughter is an instant vacation.
~Milton Berle

Engineering Flowchart





Dear Readers,

The *Machinatores Vitae* newsletter is a publication of the EPAC, but we need help in bringing you the stories 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 three times a year and posted on the USPHS Engineer Professional Advisory Committee website. The next issue of the newsletter will be published in May 2012. The deadline for submitting articles is April 15, 2012.

If you have suggestions or comments about the newsletter, or would like to submit an article, please contact the editors at epac@usphsengineers.org.

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