

## Accelerating Technologies, Creating Partnerships, & Building Awareness to Support the Warfighter

**WELCOME TO THE** summer 2014 issue of *Currents*. As blistering heat and humidity strain our climate control systems here in DC and summer storms cause electrical outages across the country, I'm reminded of how fragile our infrastructure can be—and how important it is to reduce vulnerabilities both ashore and at sea while increasing resiliency to support our Chief of Naval Operation's tenants of Warfighting First, Operate Forward, and Be Ready. Vulnerabilities can be as straightforward as not having the fuel where and when you need it, or the shore power to support a critical mission, or as complex as environmental planning challenges that impact our ability to train and test new systems and technologies at sea.

With that broad definition of vulnerability as background, I'll use this space to touch on a recent sea level rise speaking engagement; some energy-related technology and awareness initiatives that are ongoing; a wind turbine agreement; and some of our recent public outreach efforts.

In the realm of infrastructure fragility, I spoke at the TechSurge "Technical Support for Coastal Resiliency" conference in June at Old Dominion University in Norfolk. Naval Station Norfolk is our largest naval base, and by virtue of its location, it's susceptible to sea level rise. To explore solutions, representatives from the White House Council on Environmental Quality, the National Security Council, and other Federal, state and local governments gathered at the event to discuss the encroachment challenges sea level rise could impose on the region. Bottom line: our bases and Sailors of the future can't be under water after every storm. To be successful, we need to work together with communities and across all levels of government to address this challenge and increase our resiliency—no one entity is going to solve this issue alone.

In terms of energy technologies, we're working hard with the Naval Sea Systems Command (NAVSEA) on a plan to accelerate the installation of light emitting diode (LED) bulbs for all surface combatant ships within the next few years, and NAVSEA is aggressively pursuing commercial solutions to increase qualified vendors and drive down

cost. Energy efficiency is a consideration here, but the even more important benefits will be less maintenance (because LED bulbs last up to five times longer than fluorescents), better light quality for Sailors, reduced risk for our Sailors from a safety perspective

(because in many locations onboard a ship lights are not a simple item to replace), and reduced hazardous waste disposal. (Mercury is typically present in fluorescent tubes but not in LED bulbs.) Various other technologies (including networked thermostats, bow bulbs to improve ship hydrodynamics, variable speed pumps and motors, and stern flaps) are also being integrated on more ships in the not-too-distant future.

We partnered with Navy and Marine Corps commands to host a very successful Naval Energy Pavilion at the Sea-Air-Space (SAS) exposition at National Harbor, MD in April. The exhibit featured videos, a 3D printer, expeditionary equipment (e.g., ruggedized photovoltaic and water filtration gear), an electric car, scale models of energy efficient shipboard systems, and other hardware to help inform attendees about some of the energy-related technologies and culture change concepts we're exploring. During the event, I hosted four industry roundtable sessions (maritime, aviation, expeditionary, and shore) to discuss energy challenges and opportunities in each of those areas that we face. SAS was a great opportunity to connect with government, industry, academia, and technical experts and share our message with interested stakeholders.

In line with our energy culture change efforts, we're presently ramping up our involvement in a "social business" initiative as part of MilSuite (<https://www.milsuite.mil>). Our intent is to leverage MilSuite to create virtual communities, share ideas, and comment on documents and concepts in a collaborative work environment to promote the concept that many minds together yield more innovative solutions than individual ideas. The site,



which is accessible via Common Access Card, is gaining popularity among Navy Sailors, civilians, and contractors worldwide. MilSuite groups host topical conversations and work on issues in discussions and blogs that capture the insight of those making warfighter missions succeed. To quote Vice Admiral Cullom (Deputy Chief of Naval Operations for Fleet Readiness and Logistics), ‘Social business promotes and captures the wisdom of the crowd.’ I too am a big believer in collaborating on ideas, because the end result is often better than an idea any of us could have thought of independently.

We are also launching new elements of our “Energy Warrior” awareness campaign, including promotional videos and a tablet-device application that promote the importance of energy—both ashore and afloat—to enable combat capability. The campaign is intended to motivate Sailors to change how they view and use energy and encourage them to download the Energy Warrior app. Be on the lookout for the first edition entitled “Disrupt the Future,” which will be available on iTunes and in Android format. We’re trying to create a robust online destination for innovative people, ideas, and technology that will help drive the Navy toward energy resiliency. Our vision is to evolve the product from a digital publication series into a “collaborative reality platform.” We believe this can be a foundation for group problem solving and cross-disciplinary team building.

In compatibility-related news, we recently reached an agreement with E.ON Climate and Renewables (EC&R) Development, LLC to relocate proposed wind turbines near Naval Weapons Systems Training Facility Boardman in Oregon. Turbines were originally proposed within a military aviation route used for low-altitude training, and would have presented an obstruction to our pilots. The memorandum of agreement was signed April 25 by officials from the Department of Defense, the Department of the Navy, and EC&R, and will help us avoid adverse impacts on critical flight training and testing. By working together early in the planning phase, we were able to create a situation that allows for the development of renewable energy without impact to our ability to train.

Due to sequestration, many outreach events were cancelled in 2013, including fleet weeks, air shows, and Navy Weeks. This seriously limited opportunities to engage with the public and share information about our mission and programs—which of course creates a vulnerability for us because of the knowledge gap that many

Americans have about what we do and why it’s important. Luckily, outreach events have returned for 2014, and my office has been working closely with the Fleets, System Commands, and regions to ensure that the Navy’s energy and environmental programs are highlighted at key events this year. We supported New York Fleet Week (21–26 May) and Portland, Oregon Fleet Week (5–8 June) with energy/environmental exhibits this summer, and plan to have a similar presence at select events this fall. Additionally, U.S. Fleet Forces Command (USFF) has stood up a “Stewards of the Sea” Facebook page to highlight the Navy’s commitment to environmental stewardship and the importance of energy. If you haven’t seen it, please visit the site at [www.facebook.com/USNavyStewardsoftheSea](http://www.facebook.com/USNavyStewardsoftheSea).

Another great outreach initiative is the “Stewards of the Sea” exhibit, located at the Nauticus Museum which I recently toured. I was thoroughly impressed—the creative team did a tremendous job. The 1,000-square-foot exhibit explores how the Navy protects marine life and safely manages our waste stream at sea while fulfilling our mission. The exhibit was created through a partnership with USFF and the Hampton Roads Naval Museum. Details about the ribbon cutting for the exhibit can be found on page 36 of this issue.

Finally, I want to take a moment to recognize the winners of the fiscal year 2013 Chief of Naval Operations Environmental Awards. Congratulations to each installation, ship, team and individual for your accomplishments. You’re setting a superb example for how we can protect the environment and complete the mission. Winners are highlighted on page 6.

The vulnerability connection with energy and the environment seems obvious to me: if we continue our outstanding environmental stewardship and seek and deploy innovative energy technologies and practices that increase our range and time untethered from refueling, we increase our capability and ability to operate forward, which is what the Navy is all about: being where it matters, when it matters.

One effective way to decrease vulnerability is through being well informed. In that regard, thanks for reading *Currents*, and for your continued interest in and support of the Navy’s energy and environmental initiatives. ⚓

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