

SUMMER 2014

NESDI NEWS

Highlights & Happenings



Welcome

This quarterly update provides you with the latest information about program operations, significant accomplishments, and future focus areas for the Navy Environmental Sustainability Development to Integration (NESDI) program. We hope you will find these insights useful and that they encourage you to participate (or increase your involvement) in the program over the coming months.

**The NESDI Program: Integrating
Green Technologies Into the Fleet**





From the Program Manager's Desk



Leslie Karr, P.E.
NESDI Program Manager

Welcome to the summer 2014 issue of *NESDI News: Highlights & Happenings*—part of our ongoing effort to keep you up-to-date about the NESDI program. This quarterly update provides you with the latest information about program operations and recent accomplishments.

This will be my last newsletter as your NESDI program manager. After nearly five years at the helm of the NESDI program, I decided to retire from federal service effective June 3. With just under 34 years of service, I was fortunate to have risen from the ranks of an RDT&E Principal Investigator to leading the program that I participated in from the day I started with the Naval Facilities Engineering Command (NAVFAC). I enjoyed the challenges I faced as well as the innovative technologies I worked with during my career. Our unique issues always kept the job fresh and intellectually stimulating for me. I met a lot of talented individuals throughout the years serving in a multitude of roles. Your dedication to solving the Navy's environmental issues is awesome to say the least. I hope to come back in some capacity to help ease the transition for my successor (and perhaps for myself as well). I appreciate all of the support I have received from the hardworking members of our Technology Development Working Group (TDWG), all of you who faithfully submitted needs over the years, our resource sponsor (the Chief of Naval Operations Energy and Environmental Readiness Division (OPNAV N45)), my liaison Bob Neumann, OPNAV N45's RDT&E action officer, our many fine Principal Investigators, and our demonstration partners in the field. By working together, we were able to achieve more than going solo. You all share in the success of the program that I have enjoyed during my tenure. I thank you sincerely for all of your efforts and I will miss each and every one of you.

I trust that the same level of engagement will be given to my successor—Ken Kaempffe from the Engineering and Expeditionary Warfare Center (EXWC). By the time you are reading this he will have assumed the role of NESDI program

manager. Ken brings a wealth of experience with him to the NESDI arena. Since 2010, Ken has served as head of the Environmental Technology Transfer and Central Programs Branch at EXWC supervising a staff of 17 engineers and scientists in program areas including scientific diving services, environmental compliance technology transfer, environmental planning consultation, the Oil Spill Response Equipment Program, as well as reach-back reimbursable and RDT&E projects. So Ken understands the challenges faced by shore installations and Principal Investigators when it comes to technology integration. Ken will have more insights to share with you about his own goals from the program in the fall 2014 issue of *NESDI News*.

But for now, the next major milestone on our schedule is the execution of our needs solicitation process for FY15. Although you can submit a need at any time, our formal needs collection process runs from 1 June until 1 August this year. (See our Program Schedule on page 10 of this issue of *NESDI News* for more insights.)

For the NESDI program, a “need” defines a requirement to eliminate or reduce an environmental constraint that:

1. Addresses a Fleet operational challenge
2. Identifies an existing gap in knowledge, technology, and/or capability
3. Is associated with an environmental constraint or regulatory driver

When submitting a need, I encourage you to provide as much information as you can about your issue. What is the problem? How big is it? What’s the basis of the problem? Is it due to a current or impending regulatory requirement

that now makes your job more difficult? Is it a technology gap? Is it a fleet operational challenge? Is the problem unique to your facility or is it applicable across the Navy?

For more information about submitting a need, read the “Using Our Web Site” section on page 7 of this issue of *NESDI News*, visit our web site at www.nesdi.navy.mil, or contact your TDWG representative.

For the past several weeks, the TDWG and I have been conducting a final review of the full proposals that we received to address the priority needs we collected during our FY14 needs solicitation. More information about the results of our final review of full proposals is provided in the “FY15 “New Start” Projects” section in this issue of *NESDI News*.

Leslie A. Karr



Who We Are

The NESDI program is the Navy’s environmental research and development demonstration and validation (6.4) program, sponsored by the Chief of Naval Operations Energy and Environmental Readiness Division (OPNAV N45) and managed by the Naval Facilities Engineering Command (NAVFAC) from the Engineering and Expeditionary Warfare Center in Port Hueneme, CA.

The mission of the program is to provide solutions by demonstrating, validating, and integrating innovative technologies, processes, materials, and by filling knowledge gaps to minimize operational environmental risks, constraints, and costs while ensuring Fleet readiness.



FY15 “New Start” Projects

For the past several months, NESDI personnel have been busy reviewing the full proposals we requested from across the Navy to address the priority needs identified in FY14. As a result of that review, we intend to initiate the following ten “new start” projects in FY15:

NO.	TITLE	PRINCIPAL INVESTIGATOR	COMMAND	OBJECTIVE
1.	Enhanced Trivalent Chromium Pretreatment (eTCP) for Improved Coloration and Corrosion Performance of Aluminum Substrates	Peter Sheridan	NAVAIR	To identify and optimize an eTCP that provides a uniform color change to the aluminum substrate following conversion coating and encourage better integration of eTCP as a pretreatment.
2.	Design Closed-Loop Cooling Water System to Accommodate Ships Cooling Water Needs	Sonny Maga	NAVFAC	To develop a comprehensive strategy to guide investments dealing with the compliance of ship cooling water discharges while in port.
3.	Investigation of Improved Epi-Seal Materials for Use in General Purpose Bombs	John Rettig	NAVAIR	To characterize the current Epi-seal material and determine which properties to alter to improve the material that will reduce leakages in general purpose bombs.
4.	Demonstration of an Improved Method for Quantifying Algal Biomass to Meet Nutrient Numeric Endpoint Compliance	Kara Sorensen	SPAWAR	To demonstrate and validate a cost effective and accurate method for measuring subtidal benthic algal biomass.
5.	Pierside In-Situ Discharge Monitoring for Collection, Holding, and Transfer Contaminants	Rachel Jacobs	NAVSEA	To incorporate a set of sensors into a single package that can identify whether ships are discharging oil, saltwater, or foam constituents that could harm a downstream wastewater treatment plant.
6.	Underwater Remotely Operated Vehicle (ROV) Mounted Ultra-High Pressure (UHP) Waterjet Cutter Tool for Underwater Munitions Breaching	Steve Hammett	NAVFAC	To demonstrate an innovative approach to breaching underwater munitions using UHP commercially available waterjet cutting technology and a commercial ROV.

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NO.	TITLE	PRINCIPAL INVESTIGATOR	COMMAND	OBJECTIVE
7.	Enterprise NAVFAC Hazardous Waste Application	Eric Friedl	NAVFAC	To develop and demonstrate an enterprise database application to streamline how NAVFAC manages and tracks its hazardous waste.
8.	Multi-Sensor Weapons Impact Detection and Location System	Joey Trotsky	NAVFAC	To demonstrate and validate a Multi-Sensor Weapons Impact Detection and Location System and provide technical integration on how to use the technology at Navy ranges.
9.	Radiant Cooling for Closed-Loop Water Containment	Daniel Grady	SPAWAR	To develop an Initiation Decision Report to determine if radiant cooling technology is mature enough for deployment at a Navy shipyard.
10.	Develop an Automated Real-Time Opacity Monitor for Use in Determining the Opacity of Fugitive Emissions in lieu of EPA Method 9	Pat Morrow	NAVSEA	To provide Puget Sound Naval Shipyard with a commercial-off-the-shelf technology that can provide real-time measurement of opacity and generate an alarm when opacity emission limits are reached.

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Sailors aboard the Arleigh Burke-class guided-missile destroyer USS Porter (DDG 78) disconnect the collection, holding and transfer (CHT) system from shore drainage while preparing to get underway. The goal of one of the NESDI program's "new start" projects is to incorporate a set of sensors into a single package that can identify whether ships are discharging oil, saltwater, or foam constituents from their CHT systems that could harm a downstream wastewater treatment plant.

Photo Credit: U.S. Navy photo by Mass Communication Specialist 3rd Class Scott Pittman

FY15 “New Start” Projects *(continued)*



The aircraft carrier USS Ronald Reagan (CVN 76) en route to Hawaii for Rim of the Pacific 2014. The NESDI program is launching a new effort to develop a comprehensive strategy to guide investments dealing with the compliance of ship cooling-water discharges while in port.

Photo Credit: U.S. Navy photo by Ensign Joseph Pfaff



Aviation Ordnancemen prepare pallets of 2,000-pound general purpose bombs to be airlifted from the flight deck of the Nimitz-class aircraft carrier USS Harry S. Truman (CVN 75) to USS Dwight D. Eisenhower (CVN 69) during an ammunition offload. One of the NESDI program’s “new start” projects will characterize the current material used to seal general purpose bombs and then determine which properties of that sealant to alter to reduce leakages from these bombs.

Photo Credit: U.S. Navy photo by Photographer’s Mate Airman Ricardo J. Reyes

The funding of these “new start” projects will depend on the overall program budget for FY15 and other important program priorities. As our Principal Investigators dive into these projects, we will keep you up-to-date on their progress in future issues of *NESDI News*.



Using Our Web Site

To submit your need, visit the “Environmental Needs” section on the NESDI web site (at www.nesdi.navy.mil) then click on the “Submit A Need Now” button. This will take you to the “NESDI Environmental Needs Submission Form.”

www.nesdi.navy.mil

Use this on-line form to tell us everything you can about your need. Then use “Spell Check” to correct any typos and click on the “Submit Need” button to complete the process.

Once you submit your need, technical experts assembled by NESDI program management will assess, validate, and rank it. You will be notified about the ultimate status of your need once this ranking process is complete. If you submitted a need in a previous year and it is still a valid need, please resubmit it via our web site and provide any updated information you may have.

For more information, download our *Reference Guide: Submitting and Evaluating Needs* by visiting the NESDI web site at www.nesdi.mil then clicking on the “Environmental Needs” button. Any other questions about the use of our web site can be directed to Eric Rasmussen, our webmaster, at 732-323-7481 and eric.rasmussen@navy.mil.

Using Our Web Site *(continued)*

The screenshot shows a web browser window displaying the "Submit A Need" page. The page has a blue header with the NAVFAC logo and the text "Navy Environmental Sustainability Development to Integration Program". Below the header is a navigation menu with links like "Home", "Program Details", "Current Projects", "Environmental Needs", "Pre-proposals", and "Management Login". The main content area is titled "NESDI Needs Submission Form" and contains several sections: "Your Contact Information (all fields required)" with fields for Name, Address, E-mail, Command, Activity, and Phone; "Need Description and Context (all fields required)" with a Title field (150 Characters Max) and a Description of Need field; "Explain the ramification(s) if this need is not met (fines, penalties etc.)"; "Key Policy or Regulatory Drivers"; and "Solutions Suggested". On the left side of the form, there is a sidebar with a "Submit A Need" button and a "This is an official U.S. Navy Web site" notice. At the bottom of the sidebar, there is a contact information block for the Chief of Naval Operations, Energy and Environmental Readiness Division (346), 2000 Navy Pentagon, Room 2C258, Washington, DC 20350-2000.

Currents Articles Now on Web Site

As you may know, many of our more successful projects have been featured in *Currents*, the Navy's energy and environmental magazine. So that you have easy access to all of those articles, we have uploaded them to the NESDI web site under the appropriate project.

To find a *Currents* article about your favorite NESDI project, go to our web site (www.nesdi.navy.mil) and select "Current Projects" and a table of current projects will appear. If a *Currents* article has been written for a particular project, a link to that article will appear under the "More Information" column on the right of the screen. As highlights of successful NESDI projects appear in future issues of the magazine, we will upload those articles as well.



www.nesdi.navy.mil



Submit Your Photo! Recommend Your Site!

We are always looking for some good pictures of our project demonstrations in progress. Or do you have another site for us to consider for one of our ongoing projects?

So whether you've got a great picture to share or a new demonstration site to propose, let us know. Your picture, your site or both may end up in a future issue of *NESDI News*.



Program Releases FY13 Year in Review Report



Annual Report Highlights Program Processes & Perspectives

The NESDI program has released its most recent annual report, entitled “NESDI FY13 Year in Review Report: Process and Perspectives.” You should notice two significant changes to our annual report format. We still highlight the successes enjoyed and challenges met by the NESDI program in FY13, but have organized the report around the four-stage process we follow to execute the program each year rather than Environmental Enabling Capabilities. The other change is the incorporation of perspectives from the TDWG and others on the current state of the NESDI program and its processes.



Financial Summary

Program Funding

The following table provides a summary of the program's funding for FY13. The data is presented in millions of dollars (\$M).

	FY12	FY13	FY14	FY15	FY16	FY17
Request	40.0	40.0	40.0	40.0	40.0	40.0
Actual	40.0	40.0	40.0	40.0	40.0	40.0
Change	0.0	0.0	0.0	0.0	0.0	0.0
Program & Non-Program	40.0	40.0	40.0	40.0	40.0	40.0
Program	40.0	40.0	40.0	40.0	40.0	40.0
Non-Program	0.0	0.0	0.0	0.0	0.0	0.0
Total	40.0	40.0	40.0	40.0	40.0	40.0



For a hardcopy of the NESDI program's FY13 and other Year in Review reports, please contact Lorraine Wass at 207-384-5249 or ljwass@outlook.com. An electronic (pdf) version of the report can also be downloaded from the program's web site at www.nesdi.navy.mil.



Program Schedule

From now through the end of the summer, the program will concentrate its efforts on collecting and screening needs received via our FY15 solicitation. A complete program schedule is provided below.

NO.	WHAT	WHEN
1.	Close FY15 Needs Solicitation	1 August 2014
2.	Screen Needs	11-15 August 2014
3.	Evaluate & Rank Needs	8-12 September 2014
4.	Obtain Sponsor Review & Approval of Needs	15-26 September 2014
5.	Request Pre-proposals	10 October 2014
6.	Conduct OPNAV N45 Programmatic Review	22 September - 3 October 2014
7.	Close Pre-proposal Collection	12 November 2014
8.	Collect TDWG Comments on Pre-proposals	17 November 2014
9.	Evaluate Pre-proposals	17-21 November 2014
10.	Request Full Proposals	11 December 2014
11.	Collect Full Proposals	18 February 2015
12.	Deadline for Functional Working Group Comments on Full Proposals	13 March 2015
13.	Collect TDWG Comments on Full Proposals	20 March 2015
14.	Screen Full Proposals	23-27 March 2015
15.	Deadline for Principal Investigators to Answer Screening Questions	27 April 2015
16.	Conduct In-Progress Reviews	Spring 2015 (Stormwater & East Coast) (Norfolk, VA) 4-8 May 2015 (West Coast) (TBD)
17.	Evaluate Full Proposals	8 May 2015
18.	Obtain Sponsor Review & Approval of Full Proposals	8 June 2015
19.	Announce New Starts	30 July 2015
20.	Announce FY16 Needs Solicitation	1 June 2015
21.	Quarterly Status Reports Due (all Mondays)	6 October 2014 5 January 2015 6 April 2015 6 July 2015

Check out our web site (www.nesdi.navy.mil) for the latest version of our program schedule.



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GETTING ON OUR MAILING LIST

If you're not already on our mailing list and want to subscribe to *NESDI News*, please send your email address to Lorraine Wass at 207-384-5249 or ljwass@outlook.com.

CONTACT YOUR TDWG MEMBER

For more information about the operation of the NESDI program, contact Ken Kaempffe, the newly-appointed program manager, or members of the TDWG.

No.	Name	Command	Phone	Email
1.	Kaempffe, Ken (Chair)	NAVFAC	805-982-4893	ken.kaempffe@navy.mil
2.	Bendick, John	NAVSUP	717-605-9144	john.bendick@navy.mil
3.	Brock, Dave	NAVAIR	904-790-6398	david.l.brock@navy.mil
4.	Cahoon, Lynn	NAVAIR	252-464-8141	albert.cahoon@navy.mil
5.	Earley, Pat	SPAWAR	619-553-2768	patrick.earley@navy.mil
6.	Hertel, Bill	NAVSEA	301-227-5259	william.hertel@navy.mil
7.	McCaffrey, Bruce	Consultant	773-376-6200	brucemccaffrey@sbcglobal.net
8.	Porter, Christine	CNIC	202-433-4959	christine.porter@navy.mil
9.	Rasmussen, Eric	NAVAIR	732-323-7481	eric.rasmussen@navy.mil
10.	Sugiyama, Barbara	NAVFAC	805-982-1668	barbara.sugiyama@navy.mil
11.	Venable, Bill	NAVFAC	805-982-1674	william.venable@navy.mil
12.	Webber, Cindy	NAVAIR	760-939-2060	cynthia.webber@navy.mil



IN THE NEXT ISSUE OF NESDI NEWS

There is a lot more information coming your way in the next issue of *NESDI News: Highlights & Happenings*. In our fall 2014 issue, we will provide you with an update on the results of our efforts to collect and screen the needs we received from our FY15 solicitation process.



Until then, look for an article entitled "Diverting Food Waste from Landfills Saves Money & the Environment: NESDI Project Includes New Guidance Document for Navy Solid Waste Managers" about one of our most recent projects in the next issue of *Currents*, the Navy's energy and environmental magazine.

You can read *Currents* on-line and subscribe to the magazine at: <http://greenfleet.dodlive.mil/currents-magazine>.