



Supported by the NESDI program's development of safer, more sustainable materials like chromate-free primers, these sailors maintain mission readiness on the flight deck through both routine cleaning and emergency preparedness. (U.S. Navy photo by Justice Vannatta)

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WHO WE ARE

The Navy Environmental Sustainability Development to Integration (NESDI) program is the Navy's environmental research and development demonstration and validation program, sponsored by Office of the Chief of Naval Operations (OPNAV) Compliance and Mission Readiness Division (N411) and managed by the Naval Facilities Engineering Systems Command (NAVFAC) from the Engineering and Expeditionary Warfare Center (EXWC) in Port Hueneme, CA.

The mission of the NESDI program is to support Fleet readiness by minimizing operational constraints associated with environmental and human health risks and to reduce cost of environmental compliance by demonstrating, validating, and integrating innovative technologies, processes, materials, and by filling knowledge gaps.

WELCOME TO THE Q2!

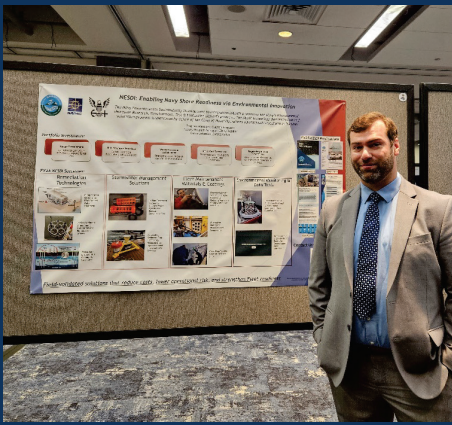
FROM THE DESK OF CLAYTON FERGUSON NESDI PROGRAM MANAGER

The NESDI program is off to a dynamic start this quarter as the TDWG undertakes the challenging task of reviewing an impressive pool of pre-proposals. The innovative science presented in these submissions is a true testament to the talent within our community, making the selection process both difficult and inspiring. While budgetary constraints require us to be selective, we are excited to see which promising projects will move forward.

In the same spirit of progress, we eagerly anticipate the upcoming In Progress Reviews (IPRs). These sessions are a vital opportunity to connect with our ongoing project teams, discuss their progress, and ensure they are on track to deliver impactful results.

None of this would be possible without the tremendous support of our partnering end-users. We extend our sincere gratitude for their invaluable role in facilitating demonstrations at their installations, which is crucial for the success of our projects.

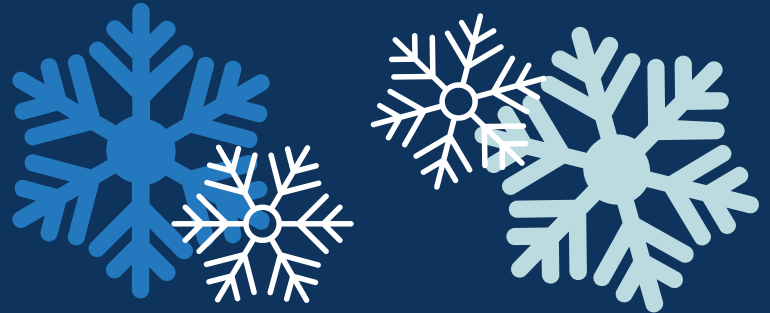
Each of these efforts, from the initial proposals to the final demonstrations, directly reinforces NESDI's core mission. We remain proud of the collective work being done by our teams to advance Fleet readiness while reducing environmental compliance costs through innovation.



(NESDI Program Manager, Clayton Ferguson, next to the NESDI poster at the 2026 DoW Applied Innovation Workshop in Washington, D.C. Photo by Molly Colvin)

THE NESDI PROCESS

The NESDI program process is a customer-driven cycle that funnels real-world needs from across the Navy into mission-ready solutions. For the current fiscal year, this process began with 33 initial needs, leading to 26 pre-proposals, and has now been down-selected to 12 teams who have been invited to submit full proposals. This structured approach ensures that only the most promising innovations are selected for investment and ultimately transitioned to the Fleet.



PROGRAM SCHEDULE

BELOW ARE KEY DATES FOR THE NESDI PROGRAM

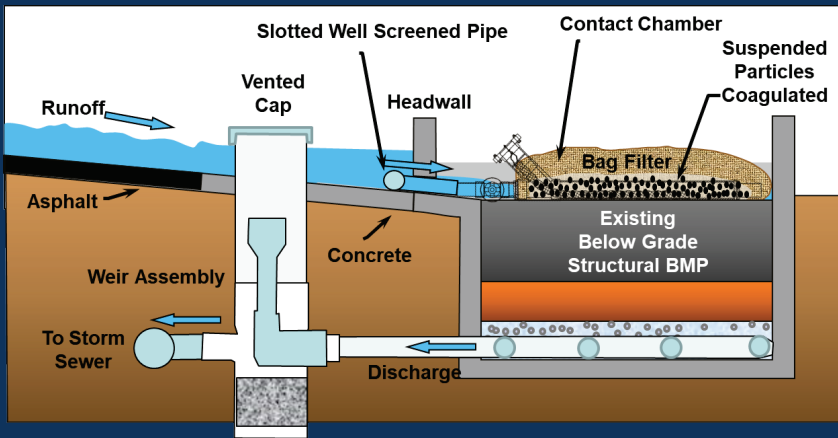
Completion of TDWG evaluations of Pre-Proposals	Feb 4, 2026
NESDI Programmatic Review with NAVFAC HQ and OPNAV N411	TBD
Full Proposals due for FY27 cycle	Mar 30, 2026
Completion of TDWG evaluations of Full Proposals	April 24, 2026
Annual In-Progress Reviews (@ NIWC Pacific, San Diego, CA)	May 4-8, 2026
Deadline to submit Needs for consideration in the next evaluation cycle	Aug 1, 2026

Dates are subject to change, please see the NESDI website for the most up-to-date information:
<https://epl.navfac.navy.mil/nesdi> (CAC enabled)
<https://exwc.navfac.navy.mil/nesdi> (public site)



NESDI PROJECT HIGHLIGHT

THE FLOW OF INNOVATION: A NESDI STORMWATER SUCCESS STORY



Schematic of structural BMP – NESDI Project 454. (Image credit: Gary Anguiano)



Installation of Structural BMP at Naval Base San Diego Recycling Center – NESDI Project 454. (Photo credit: Gary Anguiano)

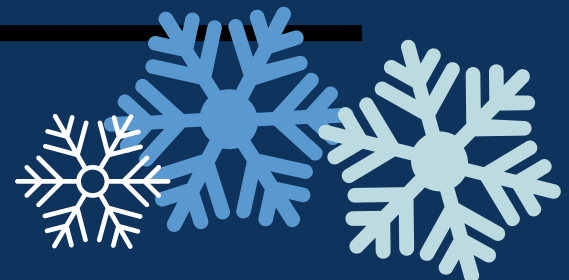


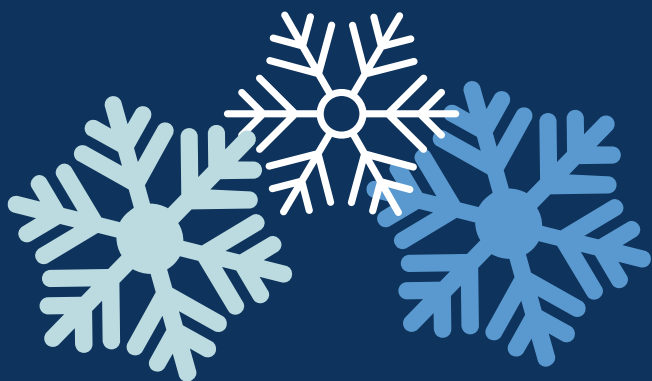
Installation of LIPPS at PSNS for the capture and treatment of stormwater runoff – NESDI Project 583. (Photo credit: Denis Acosta)

The NESDI program has a strong history of evolving stormwater treatment solutions, a journey clearly demonstrated by the transition from Project 454 to Project 583. The success of Project 454: *Optimization of the Stormwater Dual Media Filtration System at NRRC, San Diego*, led by EXWC scientist Gary Anguiano, proved the effectiveness of a retrofitted, below-grade filtration system at Naval Base San Diego for removing heavy metals from industrial runoff. This foundational work laid the groundwork for Project 583, which addressed a more complex challenge: treating stormwater in high-traffic, space-constrained industrial areas.

Project 583: *Low-profile Integrated Porous Pretreatment Swale (LIPPS) for Metals Treatment in Industrial Areas*, led by EXWC scientist Denis Acosta, introduced the innovative Low-profile Integrated Porous Pretreatment Swale (LIPPS), a "zero-footprint" technology that can be installed directly beneath active operational surfaces. By successfully demonstrating the LIPPS at Puget Sound Naval Shipyard, the program evolved the proven concept of subsurface filtration into a resilient and practical solution for the Navy's most demanding industrial environments, ensuring environmental compliance without sacrificing critical operational space. This transition showcases NESDI's commitment to building upon past successes to deliver progressively more advanced and impactful technologies to the Fleet.

<https://exwc.navfac.navy.mil/Products-and-Services/Environmental-Security/NESDI/Project-Highlights/>





NESDI PROJECT HIGHLIGHT

PROJECT 601: A CASE STUDY IN SUCCESSFUL RESEARCH-TO-REGULATION TRANSITION

NESDI Project 601: *Chronic Toxicity and Bioaccumulation Evaluation of Multiple PFAS for Benthic and Pelagic Species Relevant to Marine Ecological Risk Assessment*, led by NIWC Scientist Nick Hayman, was established to address a critical DoW-wide challenge: the significant lack of data on how Per- and polyfluoroalkyl substances (PFAS) compounds affect marine life. This knowledge gap hampered the ability to conduct accurate ecological risk assessments at AFFF-impacted sites, often leading to overly conservative and costly cleanup strategies. The project systematically evaluated the toxicity and bioaccumulation of various PFAS compounds in key marine species, generating foundational data that clarified how these chemicals behave in coastal environments.

The true success of Project 601 lies in its remarkable transition from research to real-world application. The data generated was not only published in high-impact journals like *Aquatic Toxicology* and *Chemosphere* but was also directly utilized by the U.S. Environmental Protection Agency (USEPA) to help develop more appropriate national Acute Saltwater Aquatic Life Benchmarks for PFOS and PFOA. This represents a monumental step in ensuring that environmental regulations are based on the best available science.

Furthermore, the project's findings have become a cornerstone for continued research and development. The data is now being used to build comprehensive Species Sensitivity Distributions under ESTCP Project ER25-8659, and the work is being expanded upon by a leveraged SERDP project (ER22-3214) to develop even more ecotoxicity data. This powerful transition from a targeted NESDI investigation to influencing national regulatory standards and fueling further ESTCP research showcases a model of how strategic investment in science can lead to widespread, lasting impact for the Navy and the nation.



(Image credit: SERDP Project ER22-3214)

<https://exwc.navfac.navy.mil/Products-and-Services/Environmental-Security/NESDI/Project-Highlights/>



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Supporting the Naval Aviation Enterprise, this Ion Vapor Deposition (IVD) vacuum chamber applies environmentally safe aluminum coatings onto critical components. This process is a key step in replacing carcinogenic hexavalent chromium post-treatments, ensuring the long-term health of our artisans while maintaining the high-performance corrosion resistance necessary for mission success. (NESDI Project # 634; Image Credit: Kaitlyn Elkins)



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