

Natural Selections



In this Issue: **Sustaining Military Readiness: The Role of Natural Resources Management in Enabling the Mission**

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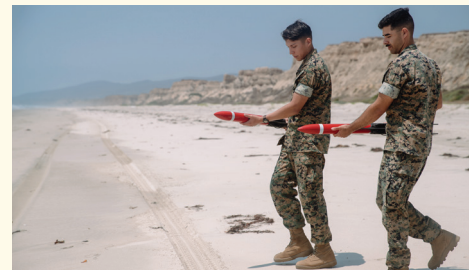
Message from the DOW Natural Resources Program

Jennifer Oelke Farley, Director, DoW Natural Resources Program

Natural Resources Partners and Stakeholders,

I am pleased to serve as the new Director of the Department of War's (DoW) Natural Resources (NR) Program. Our work ensures that the nearly 27 million acres of land, water, and airspace supporting warfighter testing, training, and operations remain fully capable of sustaining the demands of the force.

Last year, as we recognized 65 years of the Sikes Act (16 U.S.C. § 670a–670o), we were reminded that natural resources management is a cornerstone of military readiness. The Sikes Act established the framework that integrates conservation with mission requirements through Integrated Natural Resources Management Plans (INRMPs) and enduring partnerships with federal and state agencies. For more than six decades, this model has ensured that effective natural resources management strengthens testing, training, and operational capability while sustaining the lands and waters that make those missions possible.



Marines with the 15th Marine Expeditionary Unit deploy JaiaBot autonomous underwater vehicles during training at Camp Pendleton, California. Access to coastal and littoral environments allows warfighters to integrate new technologies, gather critical environmental data, and strengthen mission readiness. Source: Lance Cpl. Kenneth Twaddell.

That alignment is more critical than ever. Our installations operate in complex, rapidly evolving environments that serve as the proving grounds for military lethality. Today, those landscapes face increasing pressures from extreme weather, wildfire, coastal change, invasive species, and encroachment. Through science-based management, adaptive strategies, and collaborative partnerships, the Natural Resources Program enhances installation resilience, safeguards critical infrastructure, and preserves the operational flexibility our warfighters depend on.

This newsletter highlights real world examples of how our program and partnerships fortify the mission—from wildfire readiness that protects training tempo, to coastal resilience projects that secure aviation testing infrastructure, to restoration efforts that preserve irreplaceable training ranges. Together, these efforts demonstrate how natural resources management directly enables operational effectiveness across the DoW enterprise.



Marines with 3rd Battalion, 2d Marine Regiment train on rugged terrain during Exercise Raven in Nashville, Tennessee. Natural landscapes like these provide the realism and complexity needed to prepare warfighters for the challenges of combat. Source: Cpl. Patrick King.

As I begin my tenure as the DoW NR Program Director, I am grateful to join such a dedicated community of professionals and partners. I will carry this work forward, meeting the challenges before us and ensuring our natural resources continue to serve the mission and the people who depend on them.



A TRIBUTE TO RYAN ORNDORFF



Ryan Orndorff presents DoW Natural Resources policy updates at the 2024 National Military Fish and Wildlife Association (NMFWA) Annual Meeting and Training Workshop in Grand Rapids, Michigan, where he highlighted resilience initiatives, partnerships, and species recovery successes

Last year, the DoW Natural Resources Program lost a trusted leader and dear friend. Ryan Orndorff passed away on April 14th, 2025, after a courageous battle with a rare form of lymphoma. On behalf of the DoW Natural Resources Program, we'd like to take this opportunity to honor his life, celebrate his legacy, and reflect on the extraordinary impact he made across the DoW.

There are few people who have shaped DoW's approach to conservation as profoundly as Ryan. A native West Virginian, Ryan joined the DoW Readiness and Environmental Protection Integration (REPI) Program as Deputy Program Director in 2015 after serving as a Natural Resources Specialist at Headquarters Marine Corps and as Sikes Act Coordinator for the Army National Guard. Over the next decade, he rose to Director of the DoW Natural Resources Program, and in 2022, he assumed leadership over the broader DoW Environmental Planning & Conservation (EP&C) portfolio. Throughout his tenure, Ryan was a natural center of gravity for the EP&C team. He was a steady leader with a measured and thoughtful approach, which set the stage for many national and local DoW partnerships and initiatives to flourish.

In 2018, Ryan championed the establishment of the DoW Recovery and Sustainment Partnership Initiative (RASP), a collaboration between DoW and the Department of the Interior that preserves the military's readiness and training missions while contributing to species recovery.

Thanks in large part to Ryan's leadership and the ability to bridge disciplinary boundaries, the Okaloosa darter (*Etheostoma okaloosae*) and five species on San Clemente Island were delisted or removed from the list of threatened and endangered species under the Endangered Species Act (ESA) after decades on the list. This achievement, in addition to being a resounding national conservation success, provides for essential mission flexibility and decision space at several DoW installations.

Ryan's influence extended across a wide network of conservation partnerships. He served as the DoW co-chair for the Southeast Regional Partnership for Planning and Sustainability (SERPPAS) beginning in 2018 and represented the DoW on the Federal Coordinating Committee for America's Longleaf Restoration Initiative, the Federal Native Plant Conservation Committee, and the Cooperative Ecosystem Studies Units National Network. In these roles, he championed DoW's mission and its conservation efforts.

Through his work with the Partners in Flight, Partners in Amphibian and Reptile Conservation, and Small Mammals Initiative Networks, Ryan ensured the military's vast training lands were part of the continental strategy for conserving vulnerable avian, herpetofauna, and mammal species. He also accelerated DoW's participation in the Avian Knowledge Network (AKN), making DoW's vast bird data repository accessible as a decision-making tool and establishing the DoW AKN Program to oversee the implementation of the AKN across the DoW and ensure the long-term benefits and usability of this resource. Today, DoW is recognized as a leader in the AKN.

He brought this same care and drive to the Collaborative Wildlife Protection and Recovery Initiative (CWPRI), harnessing this group to advance species-focused conservation to enhance DoW's ability to carry out its mission.



Ryan in the jump seat of a Black Hawk helicopter during the 2023 Natural Resources Off Site Visit at Camp Williams, Utah. Source: Rebecca Meyer



Ryan on location at Fort Stewart, Georgia, during a prescribed fire demonstration conducted as part of the Legacy-funded project Spotlight on 50 Years of the Endangered Species Act. Source: Paul Block, NAVFAC BASH Program

He applied the same vision in creating the Gopher Tortoise Conservation and Crediting Strategy. The innovative, voluntary conservation strategy helped prevent the eastern population's listing under the Endangered Species Act (ESA), while safeguarding military training flexibility. The gopher tortoise's (*Gopherus polyphemus*) longleaf pine habitat doubles as some of DoW's most important training landscapes. By averting the tortoise's ESA listing in its eastern range, DoW protected a keystone species while keeping critical training across its Southeastern installations unencumbered.

Ryan's aspirations for natural resources stewardship to advance the military mission went well beyond building programs and partnerships. He recognized the power of policy as a tool to align conservation goals and military priorities, focusing efforts where they could achieve the greatest impact. Ryan embedded this ethos into DoW's policies, from the DoW Instruction on natural resources management to the DoW's outreach and communications approach. Through the Conservation Policy Initiative under the RASP, he emphasized a simple but powerful idea: conservation enables the mission, and installations that excel in conservation should be held up as examples for others to follow. Each year, he reinforced this message in his annual "state of the union" address on DoW's natural resources program at the National Military Fish and Wildlife Association meeting, speaking directly to, as he put it, the "people on the ground doing the hard work".

Outside of his professional life, Ryan was an avid outdoorsman, fisherman, and kayaker. During his college years, he guided raft tours on the Potomac and Shenandoah Rivers, introducing others to the waters and mountains he grew up exploring. He was also a devoted naturalist with a deep knowledge of and appreciation for his native Appalachian flora and fauna.

Most importantly, he was a loving husband to Rachel, and a father who shared his passion for the outdoors with his son, Charlie, and daughter, Avenelle.

Those who knew Ryan well would be quick to tell you that he was a kind and forthcoming man, and a patient mentor to those who turned to him for advice. He listened carefully, embraced differing views, and offered informed and pragmatic guidance. Ryan welcomed varying viewpoints and ideas, guiding conversations toward consensus. He revealed the common ground beneath competing views, often with a touch of inadvertent humor. He was famous for his "harebrained ideas" that challenged the status quo in natural resources policy. He pushed us to focus on the possible, strive towards what could be, and to always ask ourselves, "how can we achieve success in conservation and enable the mission?" Many of us carry pieces of his leadership style in our own work and embrace the possible, just as he did.

Ryan's absence is deeply felt. However, his professional legacy will live on through the policies he touched, the colleagues he inspired, and the partnerships he built, which will continue steering this work for years to come. This legacy remains visible in the missions he helped protect, the species that thrive because of his leadership, and the generations of conservation professionals who will follow in his footsteps.

A colleague of Ryan's reminded us of the Aldo Leopold quote, "It is a fact, patent both to my dog and myself, that at daybreak I am the sole owner of all the acres I can walk over. It is not only boundaries that disappear, but also the thought of being bounded. Expanses unknown to deed or map are known to every dawn, and solitude, supposed no longer to exist in my county, extend on every hand as far as the dew can reach."



Ryan at San Clemente Island in 2023, attending the ceremony marking the delisting of five species under the Endangered Species Act. Source: Tammy Conkle

In that spirit, we can easily envision Ryan at sunrise, walking his favorite paths unbounded, and embracing dawn's solitude. And we walk that path with him – and for him.

65 YEARS OF THE SIKES ACT: STEWARDING THE LANDS THAT SUSTAIN THE FORCE

For over a century, the DoW has managed military lands to meet evolving mission requirements - from the cavalry and trench warfare drills of World War I to today's complex airdrop and medic training exercises. Yet it wasn't until 1941 at Eglin Air Force Base (AFB) that a formal natural resources program was established, thanks to legislation championed by Congressman Bob Sikes and supported by military and civilian leaders in the Florida panhandle. A veteran of the Army and an avid outdoorsman, Sikes introduced a bill to create a natural resources program at Eglin AFB, and to fund land stewardship and game management activities through the sale of hunting and fishing permits. The success of this initiative led to the passage of the Sikes Act in September 1960, which expanded the program across all U.S. military installations and formally established the DoW Natural Resources Program.

The Sikes Act laid the foundation for a program that sustains military readiness while ensuring responsible stewardship of natural resources for the benefit of defense communities and the public.

The scope of the Sikes Act has continued to evolve over its 65-year history to meet new challenges. This includes supporting "no net loss" in the capacity of DoW lands and waters to sustain the military mission, promoting military installation resilience, advancing invasive species management, and encouraging access to new outdoor recreation opportunities. Amendments have also expanded DoW's stewardship responsibilities beyond game management to encompass the full spectrum of natural resources conservation.

The Sikes Act also established a unique partnership between the DoW, DOI, and State Fish and Wildlife Agencies, for the cooperative development of Integrated Natural Resources Management Plans (INRMPs) at military installations. To support INRMP implementation, the Act grants DoW the authority to form cooperative agreements with state governments, universities, and private organizations to achieve shared goals in support of testing and training, conservation, recreation, and defense community resilience.

For 65 years, the Sikes Act has enabled the Secretary of War's priorities of power projection, reestablishing deterrence, and countering emerging threats by ensuring military installation lands remain resilient and ready to support the evolving testing and training requirements across all domains. The Sikes Act has also been vital for the stewardship of our nation's natural resources, facilitating numerous conservation successes, including the recovery of threatened and endangered species, invasive species control, habitat restoration, and military installation resilience projects. These efforts safeguard the



A Sonoran pronghorn is released at the Kofa Wildlife Refuge near Marine Corps Air Station Yuma, Arizona. Once reduced to just 21 animals in the U.S., the species has rebounded through a two-decade Federal partnership that balances conservation with military training on the desert landscapes they share. Source: Cpl. Jade K. Venegas



A protected species sign marks habitat for the threatened Eastern indigo snake (*Drymarchon couperi*) at Townsend Bombing Range, Georgia. The range supports both military training and conservation, reflecting DoW's commitment to protecting natural resources while sustaining readiness. Source: Lance Cpl. Kayla LeClaire.

natural landscapes that underpin military readiness, while providing benefits to local defense communities through shared stewardship and recreational access.

As we look to the future, the Sikes Act remains a vital tool for enabling the DoW mission. We are committed to building on this 65-year legacy and delivering innovative solutions that benefit our military, our defense communities, and the natural systems entrusted to our care.

STORM PROOFING THE MISSION: FORT BELVOIR'S NATURE-BASED APPROACH TO MILITARY INSTALLATION RESILIENCE

Wayne Strebe, MS4 Program Manager, Fort Belvoir

Fort Belvoir covers approximately 8,500 acres and functions as an administrative and logistics support center for the Army with over 150 tenant organizations, over 500 buildings, and a mission that impacts over 200,000 warfighters, civilians, retirees, and families. With approximately 40% of the installation developed and largely covered in impervious surfaces, severe storms and the resulting stormwater pose an increased threat to the infrastructure, the mission, and the natural resources of Fort Belvoir.

Fort Belvoir also sits within the Chesapeake Bay Watershed; therefore, the installation's activities can have a significant impact on local natural resources. Its location within this sensitive watershed also results in more stringent requirements to reduce pollution levels and protect water quality. The challenge of protecting and maintaining mission readiness while minimizing its impact on local watersheds has led Fort Belvoir to implement more nature-based solutions to manage stormwater.

In recent years, severe storms have caused repeated flooding that damaged roads, buildings, and recreation areas across the installation. These events have impacted missions by disrupting operations and forcing closures of training areas such as the Davison Army Airfield. On several occasions, costly repairs made after one storm were undone as soon as the next storm hit. An improved stormwater system was necessary to break this damage and repair cycle.

In 2018, Fort Belvoir completed construction of a Level 2 Extended Detention Pond designed to handle the runoff from 59 acres within the installation's historic district during a 100-year storm event. The pond spans over an acre and includes a wetland feature that provides habitat for a variety of wildlife. The design of the pond allows for a higher removal rate of nutrients such as nitrogen and phosphorus, helping the installation meet reduction targets under the Virginia Pollutant



A UH-60 Black Hawk supports Soldiers from the 911th Technical Rescue Engineer Company during a helocast training exercise at Fort Belvoir, Virginia, July 25, 2024. The airborne technique prepares Soldiers for rapid insertion into maritime environments. Source: Cpl. Aaron Troutman.

Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4). By detaining water longer, the system also allows sediment to settle out of the water column and minimizes the volume of water discharged downstream during storms.

Stream restoration has also been an important aspect of Fort Belvoir's broader strategy to reduce the impact of catastrophic storms on the installation's mission. Since 2009, the installation has restored more than a dozen streams, spanning over 7,000 linear feet, with several additional projects slated to restore at least 5,000 more. These restorations strengthen stream channels to handle larger stormwater flows, reducing flood risk and protecting critical infrastructure. These repairs also reduce pollution, improve water quality and aquatic habitat, reduce soil erosion, and create a more resilient and aesthetic landscape for the community.

Nature-based solutions like detention ponds and stream restoration have proven less costly to build and maintain than more traditional, hard-engineered stormwater infrastructure. Nature-based solutions also present a compelling return on investment by reducing the amount and complexity of repairs necessary after storms.

By embracing a nature-based stormwater management approach, Fort Belvoir is proactively strengthening its mission and natural resources. Weather is less likely to interrupt operations, infrastructure is better protected, clean water requirements are being met, and the health of the Chesapeake Bay is being protected for future generations.

MISSION RESILIENCE BY LAND AND SEA: STRENGTHENING NAVAL READINESS AT NAS PATUXENT RIVER

Hilary Gibson & Emily Thorpe, Middle Chesapeake Sentinel Landscape Coordination Team

Naval Air Station Patuxent River (NAS Pax) is the Navy's premier hub for research, development, testing, and evaluation of naval aviation systems. Yet the installation faces mounting resilience challenges, from shoreline erosion, storm surge, streambank collapse, and legacy run off which threaten the very infrastructure and testing and training space its mission depends on. The Navy and its partners are responding with nature-based solutions that strengthen both mission readiness and the resilience of the surrounding lands and waters. It is essential to protect mission critical infrastructure and testing and training capacities through integrated natural resource management under the Sikes Act.

In Spring 2025, the Hog Point Restoration Project was completed adjacent to NAS Pax creating a 4,870-ft living shoreline, offshore breakwaters, and marsh habitat near the mouth of the Patuxent River in southern Maryland. Spearheaded by Southern Maryland Resource Conservation and Development (<https://www.somdrccd.org/>) and the U.S. Navy, the Hog Point project used funding from the National Fish and Wildlife Foundation, U.S. Navy, and the Readiness and Environmental Protection Integration (REPI) Program Challenge.

The living shoreline enhances NAS Pax's military resilience by safeguarding critical landing zone infrastructure along the coast and ensuring continued readiness for important helicopter training operations. Storm surge, recurrent flooding, and shoreline erosion have been identified as threats to the installation. Using predominantly natural infrastructure, this project will ensure coastal habitat resilience and improve water quality to protect essential NAS Pax testing and training space.

The project also conserves habitat for several species, including Northern diamondback terrapins (*Malaclemys terrapin*), the Maryland state reptile and Species of Greatest Conservation Need. The Navy reduces impacts to terrapin populations without constraining mission activities by relocating helicopter training operations during the nesting months for the at-risk terrapins. The Hog Point Resilience Project enhances and protects essential habitat for the terrapins, where 715 nests have been protected and roughly 6,700 turtles have hatched since 2013.

In addition to benefiting terrapins, the project's breakwaters act as artificial reefs that shelter oysters, finfish, blue crabs, and other invertebrates. The living shoreline protects submerged aquatic vegetation and shallow water habitat to support horseshoe crabs, migratory shorebirds, rockfish, blue crabs, and other Chesapeake Bay species. In addition to its ecological and mission benefits, the project maintains recreational access to coastal waterways for the community, ensuring broad value across military, environmental, and public priorities in Southern Maryland.



NAS Patuxent River Search and Rescue (SAR) aircrew hoists a simulated patient in a training to test the crew's ability to safely extract a patient and prepare them for transport to a higher echelon of care, a critical skill for newly qualified L00A corpsmen. Source: Maria Scott.



DOW NATURAL RESOURCES PROGRAM

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