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Statement of
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(Energy, Installations & Environment)

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Subcommittee on Readiness

Department of Defense
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INTRODUCTION

Chairman Waltz, Ranking Member Garamendi, and distinguished members of the Subcommittee: Thank you for the opportunity to discuss the Department of Defense's (DoD) energy, installations, and environment programs. As the newly confirmed Assistant Secretary of Defense for Energy, Installations & Environment (EI&E), I am grateful to be able to serve the people who safeguard this nation and ensure they have safe, healthy, efficient, and resilient places to live and work. Our installations are the foundations of our national security posture, and I look forward with this committee in the coming months to continue aligning our policies and resources to support the National Defense Strategy.

SUPPORTING THE NATIONAL DEFENSE STRATEGY

The 2022 National Defense Strategy (NDS) recognizes that the global threat environment is becoming increasingly complex, characterized by significant geopolitical, technological, economic, and environmental change. The People's Republic of China (PRC) remains the Department's pacing challenge with its increasingly aggressive efforts to undermine U.S. alliances and security partnerships in the Indo-Pacific region. However, we also face threats from actors like Russia, North Korea, and Iran, as well as climate change and other transboundary challenges. Together, these threats not only pressure the Joint Force's power projection and maneuver capabilities, but also put the safety and security of the homeland at risk.

To address these challenges, the NDS identifies four top-level defense priorities: defend the homeland; deter strategic attacks against the United States, our Allies, and our partners; deter aggression and be prepared to prevail in conflict when necessary; and build a resilient Joint Force and defense ecosystem.

Each mission within our energy, installations, and environmental portfolio is directly engaged in the successful execution of this strategy. Our over 500 bases, posts, camps, stations, yards, and centers around the world are the vital network of mission support capabilities that form the backbone of an integrated deterrence posture that is both resilient enough to withstand, fight through, and recover quickly from disruption, and adaptable enough to apply deterrence approaches that can be tailored to address specific challenges. We continue to ensure that the missions being conducted under the Department's campaigning initiatives are supported by reliable and secure fuel and energy, whether they are out in the field or on base. Finally, by effectively managing both the built and natural environment and ensuring that our warfighters have access to the land, water, and airspace they need to maintain their readiness, while also protecting their health and safety, we are building the enduring advantage needed to advance our defense and security goals.

The continued support of Congress, and in particular, this subcommittee, has allowed the Department to enhance the agility, resilience, readiness, and lethality of our forces around the world. There are several key priorities and progress updates that I would like to focus on today, including our ongoing efforts to optimize our posture in the Indo-Pacific region, the progress

we've made to improve the resilience of our Joint Force, and the updates on our environmental cleanup and housing programs.

SUPPORTING THE DEPARTMENT'S POSTURE IN THE INDO-PACIFIC REGION

As noted in the 2022 National Defense Strategy, the PRC is “the most comprehensive and serious challenge to U.S. national security” and that meeting this challenge will require a holistic response centered on an integrated deterrence posture in the Indo-Pacific region. The Department continues to strengthen and sustain the distributed, resilient capabilities needed achieve this posture and counter the PRC’s increasingly coercive and aggressive actions in the Indo-Pacific. We recognize that this must be done in close cooperation with our allies, partners, and other stakeholders. As such, EI&E is focusing on two critical priorities that will be critical to our Indo-Pacific posture: retaining training lands in Hawaii and addressing workforce challenges affecting the military construction work in Guam and the Commonwealth of the Northern Mariana Islands (CNMI). We look forward to working with the State of Hawaii, Guam, the CNMI, and our DoD and other Federal partners to ensure that these priorities can be addressed.

Retention of Critical Training Land in Hawaii

The relationship between the U.S. Military and Hawaii has been a critical piece of U.S. military and diplomatic strategy for over 125 years. Hawaii’s strategic location in the Pacific, its unique training and port areas, and its support for critical defense missions makes it a cornerstone of our posture in the Indo-Pacific region. In support of this vital defense mission, the Military Departments lease approximately 72,000 acres of land across five islands in the chain. These lands, which are adjacent to U.S.-owned installations, provide ideal locations for specialized defense capabilities, multi-domain operating areas to generate future force readiness, and training ranges that our Joint Force leverages along with allies and partners.

The Department recognizes that recent incidents, particularly the fuel and concentrated Aqueous Film Forming Foam (AFFF) spills at Red Hill and the diesel spill at the Maui Space Surveillance Complex, have resulted in a severe and worsening loss of public trust between the DoD and Hawaii’s people. This situation presents extremely challenging conditions for DoD negotiations with the State to retain use of these leased lands, and it is anticipated that senior DoD leadership will need to engage consistently, respectfully, and transparently to repair relationships and build back trust. The Department is working diligently to improve relationships and communicate effectively with stakeholders (state and local government, Native Hawaiian organizations, and other interest groups).

The partnerships and relationships that enable the continuation of the critical military missions in Hawaii are vital to the U.S. military strategy in the Pacific and our national strategy to promote stability in the region. The leases for approximately 44,000 acres of state land will expire within 10 years. The Military Departments are seeking to negotiate new property agreements for 22 separate parcels, including training areas, main cantonments and support areas, and easements (including ocean area) prior to their expiration in 2028, 2029, and 2030. The expected timeline for reaching new property agreements, which will require lengthy and robust environmental

compliance and real estate due diligence is 5-7 years. Through consistent, public actions that support and benefit both the military and State of Hawaii, the Department will endeavor to build relationships and set the right conditions today to enable productive future negotiations.

Construction Workforce Issues in the Indo-Pacific Region

The Department has several upcoming key posture actions in Guam and the CNMI that will require historic levels of military construction, including the relocation of Marines from Okinawa, Missile Defense Agency Defense of Guam, and Polaris Point expansion. However, while Guam ranks 3rd highest nationally in construction workforce per capita, the current military construction demands require a workforce more than twice as large as the local construction workforce (currently ~4,400 people). The anticipated levels of future military construction will further exacerbate consistent labor shortages that have already left private construction projects unable to meet their baseline needs. To deliver these critical military construction projects on time, the local workforce must be augmented. Despite concerted and sustained efforts by the Guam Department of Labor and DoD, construction opportunities in this region have never been able to attract a sufficient number of U.S. workers to Guam and the CNMI to support construction requirements. The only reliable mechanism available to DoD to sufficiently augment the construction workforce on Guam and CNMI is the H-2B visa program.

To ensure that DoD construction contractors have a stable H-2B visa workforce for the military realignment projects described above, DoD requires relief through December 31, 2029, from the H-2B visa temporary need requirement. While we appreciate the one-year extension in the Fiscal Year 2023 National Defense Authorization Act (NDAA) that pushed the expiration date to December 31, 2024, the longer-term extension is needed to meet DoD's construction requirements.

Current construction cost estimates and schedule commitments in Guam and the CNMI are based on and require a stable labor market throughout construction. The construction contracts are typically over two years in duration and in certain cases are much longer. These contracts are typically firm-fixed price contracts which require the contractor to make assumptions based on availability of resources (labor, construction materials, etc.). They may also choose not to compete for the project if the risk is too high for them to successfully complete a project. Continued short-term exemption extensions of exemption from the temporary need requirement for a H-2B visa does not resolve the uncertainty around the availability of labor and leaves the risk of annual labor market disruption intact. Heightened contractor risk will drive bid and cost increases and result in schedule delays. Labor market uncertainty will, at a minimum, significantly delay and potentially block DoD's ability to meet force posture requirements in Guam and the CNMI. The Department looks forward to working with Congress to prevent this contingency and keep currently programmed and near-term planned projects on track.

IMPROVING MISSION RESILIENCE

A key pillar of the National Defense Strategy is to build a resilient Joint Force and defense ecosystem that can operate in a contested environment at home and abroad. As such, we must

work to ensure our energy, installations, and infrastructure are resilient to a wide range of challenges, to include weather, climate, natural events, disruptions to energy or water supplies, and physical or cyber attacks. The Department requires a multi-faceted approach consisting of policy adjustments; better planning, design, and construction; and innovative technology to counter such a diverse set of threats.

Infrastructure Resilience

The Department is improving mission resilience at the building and installation level by developing policy that establishes stringent energy performance goals in new and existing buildings and enables them to run on electricity. My office is working with DoD components to leverage the Department's facility data to inform infrastructure recapitalization decisions and ensure Components have the tools necessary to prioritize building upgrades for a secure energy future. We are updating all Unified Facilities Criteria to dramatically improve the energy performance of newly-constructed buildings, support electric building systems and components to increase mission resilience and integrate effectively within an installation micro-grid. These actions add capability, ensuring installations can operate under all conditions and expanding options for providing support to civilian authorities and local communities. Finally, the Department is pursuing a comprehensive plan and associated investments to deploy the charging infrastructure essential to transition our non-tactical vehicle fleet to electric power enabling installations to further leverage our investments in micro-grids. The Department aims to have this vehicle transition complete by 2035.

Military Construction

Infrastructure resilience is integrated into the military construction (MILCON) program, where we continue to focus on critical mission requirements as well as life, health, and safety concerns. These efforts directly support operations, training, maintenance, production, along with projects that take care of our people and their families, such as medical treatment facilities, unaccompanied personnel housing, and schools.

Our focus continues to be on developing projects that are appropriately scoped and priced to ensure execution is on-time and within cost. The primary emphasis of the Department's Military Construction Reform initiative is on early involvement between project sponsors and the DoD Construction Agents (DCAs) responsible for executing the projects. In addition, we are working with the DCAs and industry to introduce their knowledge and expertise earlier into our project planning and design activities to ensure executable projects. We are close to finalizing a comprehensive policy associated with the planning and design of military construction projects. This policy will ensure that all DoD Components clearly understand the difference between planning activities and design activities to consistently apply the appropriate funding to each task. Additionally, DoD is focusing on sharing information between key project stakeholders, ensuring that critical details such as project requirements, acquisition timelines, and construction status inform proactive decisions on projects. This enhanced information sharing will allow project stakeholders to manage scope and cost changes with minimal impact to project delivery.

The Department recognizes the challenges associated with estimating and awarding military construction projects on budget, particularly given recent supply chain tightening and significant material price increases. We appreciate the additional support Congress has provided over the last few fiscal years to ensure that authorized project costs are better positioned based on market realities. However, the Department acknowledges that it has work to do to ensure that estimates result in executable projects. This year we are also making sure an appropriate level of resourcing is provided to the DCAs so they can provide improved oversight of our construction contracts.

Facilities Sustainment, Restoration, and Modernization

The Department's inventory of buildings and structures is the largest within the federal portfolio. Facilities Sustainment provides for the regularly scheduled maintenance, repair, or replacement of facility components and directly influences the condition of our facilities. These investments must be made throughout the service life of a facility to optimize its performance and support the safety, productivity, and quality of life of our personnel, while also reducing avoidable costs associated with premature deterioration. In addition to facilities sustainment funding, the Department relies upon its Restoration and Modernization program funding to provide ongoing support to reduce our maintenance and repair backlog and to modify our facilities to support improvements in our technologically driven functions.

Currently, the Department has managed the budgeting for sustainment of assets at the portfolio level with a sustainment model. This model, however, relies on an inventory approach to requirements development, which does not directly align asset investment requirements to expenditures. In implementing its Sustainment Management System (SMS), the Department has moved closer toward instituting an asset management approach to facility management. Our next step will be to improve data driven asset management by developing a facility investment optimization model for the Department that will optimize the allocation of facility repair funding to maximize the condition of our facilities. This initiative is just beginning, but we anticipate the tool will be able to promote more efficient facility investments and detail the mission benefits achieved based on the investments. Unlike our current sustainment model, this tool will consider the asset's condition, the asset's individual system components, and the mission contribution of the asset. This initiative is guiding our transition into an asset management approach for budgeting and managing the Department's inventory more holistically. It will also provide much needed data in the building component systems and their maintenance and recapitalization schedules to properly conduct sustainment, which will reduce energy demand. The additional data will also allow the Department to better plan future electrification modernization of the built infrastructure, consistent with our energy resilience goals.

Energy Resilience and Conservation Investment Program (ERCIP)

In 2021, the ERCIP program became a specified MILCON program focused on improving the energy resiliency of our installations with an emphasis on critical missions. Today, ERCIP is the backbone of our energy and water resilience investments. It prioritizes energy project investments where they best support the defense posture, with a focus on microgrids, backup generation, and energy storage. In addition, ERCIP will continue to support a range of

technologies and efforts, including renewable energy, energy storage, geothermal, accelerated deployment of air and ground source heat pumps, and infrastructure projects directly supporting distribution infrastructure for electrical vehicle charging stations. The Department appreciates the support Congress has provided to the ERCIP as it evolved from a conservation-focused program to one that emphasizes resilience.

Energy Resilience

Reliable, flexible, and resilient energy access remains essential to military capability and readiness. The Department depends on energy-resilient forces, weapon systems, installations, and infrastructure to achieve its mission, at home and abroad. While our installations utilize commercial, municipal, and host nation power and energy grids for day-to-day operations (including command and control systems, communications, lighting, heating, and cooling), as a readiness matter, we also must have credible and resilient localized installation energy capabilities that can deter, defend against, and help defeat adversarial actions. Similarly, for operational energy uses--most notably combat platforms--the Department relies on organic capabilities as well as commercial partners to provide fuel and energy to globally deployed forces. Our potential adversaries understand the essential nature of energy, and seek to degrade, delay, or deny the Department's ability to access energy at-will, reducing our readiness and deterrence posture. In response to these threats and in alignment with statute, the Department shall "ensure readiness of the armed forces for their military missions by pursuing energy security and energy resilience" (10 U.S.C. §2911) and "ensure the types, availability, and use of operational energy promote the readiness of the armed forces" (10 U.S.C. § 2926).

The President and the Secretary of Defense have directed the Department to ensure installations and forces are resilient to all hazard risks – kinetic, cyber, and natural – and that the use of energy promotes the readiness of the armed forces for their military missions. In response, the Department is making significant energy investments in both operational energy (the energy required for training, moving, and sustaining military forces and weapons platforms for military operations) and installation energy (the energy used to power permanent installations and non-tactical fleet vehicles). Enhancing energy resilience and reducing energy demand are essential to achieving Joint lethality, supporting distributed operations, and reducing risks to sustainment in contested environments.

The Department continues to invest resources in planning, research and technology development, and acquisition to promote and improve the readiness of our armed forces against pacing threats through energy awareness, energy demand reduction, energy security, and energy resilience. In doing so, the Department often engages with local communities to gain synergies across connected systems, whether energy, water, transportation or communications.

The Department also is adapting its capability development processes to better align with the challenges of contested logistics and distributed, austere operations. In April 2022, the Deputy Secretary of Defense directed that the "Department's capability development activities, from requirements to acquisition to sustainment, must increase energy supportability and must reduce energy demand across all capability solutions." In response, the Military Departments and USD(A&S) are adapting decision-making to ensure that requirements for new capabilities are

informed by contested logistics and that these requirements are supported in program decision-making.

Innovation

Making the right investments in energy and environment innovations expands the Department's operational energy capabilities, reduces fuel burden in an era of contested logistics, keeps trust with the American people and preserves vital training lands. The Department runs two, related innovation programs. For installations, the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP) make needed investments in land and species conservation to preserve access to training areas, cleanup past hazards such as munitions and PFAS, and develop energy efficiency and energy resilience solutions for DoD installations. The Operational Energy Capability Improvement Fund (OECIF), and the Operational Energy Prototyping Fund (OEPF) are the Department's only joint research efforts dedicated to developing operational energy solutions for the joint force. OECIF/OEPF invest in a range of technologies, from hybrid electric tactical vehicles that provide silent overwatch and low-signature capabilities, to blended wing body aircraft that have a fuel savings improvement of over 30% as compared to traditional aircraft and highly efficient solar cells to extend the flight time of UAVs.

Environmental Resilience

The reality of a changing climate poses a range of risks to Department readiness and threatens installation resilience through drought, dangerous heat, flooding, wildland fire, and extreme weather. The impact of these risks adversely impact training, soldier welfare, equipment performance and place and added strain on the Department's resources. The 2022 National Security Strategy recognizes climate change as a strategic challenge that is transforming the context in which the Department operates. Recognizing this Department has undertaken a range of climate measures as part of an "all-hazards" approach to installation planning. Using the DoD Climate Assessment Tool, as required in multiple NDAA's, we identify actions needed to ensure the continuity of missions at (or deploying from) our installations and incorporate those actions into installation master plans, installation resilience plans, installation energy and water plans, and construction projects. These assessment processes have now expanded to inform Department operational planning considerations for forces and equipment and wargaming scenarios. Additionally, DoD's approach to climate risk assessment has been shared with, and is being utilized by Federal interagency partners, as well as allied nations.

The Department is undertaking a range of measures that both improve and expand operational capabilities and resilience while also reducing greenhouse gas emissions (GHG). These efforts include a range of efficiency measures that reduce energy demand for operational platforms and installations such as winglets on large aircraft and highly efficient heat pumps in buildings. The Department is also deploying a range of flexible and alternative fuels technologies and electrifying tactical and non-tactical mobile platforms to reduce costs and add capability. Specific attention is being given to deploying tactical micro-grids at the operational level, as well as micro-grid technologies at installations to add resilience to key mission requirements and enhance mission assurance. The Department, in concert with other agencies such as DoE,

continues to invest in researching new technologies that promise to reduce vulnerabilities, expand environmental protections, add operational capabilities, and reduce GHG emissions.

Environmental Conservation and Compatible Development

DoD lands contain significant resources supporting our nation's natural and cultural heritage, including resources important to American Indian, Alaskan Natives, and Native Hawaiian Organizations. DoD lands provide habitats for over 500 plant and animal species that are federally protected under the Endangered Species Act and contain over 130,000 recorded archaeological sites, and 45 National Historic Landmarks. Our conservation program allows us to manage these resources in compliance with applicable Federal statutes and manage for healthy and resilient natural landscapes to reduce climate driven risks such as flooding and wildfire.

DoD has a long track record of balancing conservation of threatened and endangered species while continuing to support evolving mission needs requiring optimal use our existing ranges and training areas and developing other supporting infrastructure. DoD investments in conservation are making significant progress towards alleviating these restrictions by promoting species recovery. Through the Recovery and Sustainment Partnership (RASP) with the Department of the Interior and US Fish and Wildlife Service, DoD has worked to identify priority species and conservation actions, resulting in significant improvements to species recovery and conservation, regulatory efficiencies, and mission flexibility. In recognition of the Department's commitment to conservation, five species occurring on San Clemente Island, CA were removed from the protections of the Endangered Species Act on January 24 of this year due to the successes of the US Navy recovering these species from the brink of extinction. This is a win for both the Navy and species, and other such successes are on the horizon. We will continue to work with our Federal, state and non-governmental partners through the DoD Legacy Resource Management Program to build on these successes and contribute, as appropriate, to the priorities of the Administration's Restoring American the Beautiful Initiative.

In the next two decades, approximately 80% of the current DoD building inventory will reach 50 years of age and need to be evaluated for listing on the National Register of Historic Places. To manage the aging real property assets on installations, DoD is engaging with the Advisory Council on Historic Preservation to develop new nationwide programmatic solutions to streamline compliance responsibilities for specific categories of buildings. Such programmatic agreements reduce the time and cost of consultation as well as costs for repairs, renovations, and demolition of buildings (if needed). Absent such agreements, the Department's managerial and financial costs of complying with a variety of preservation laws will increase exponentially, diverting funds from base operations and MILCON.

Continued investments in conservation will maximize our flexibility to use our land, water, and airspace for military purposes and to address incompatible land uses beyond our fence lines and will ensure that our military and civilian personnel have the access they need to conduct mission-essential activities. Strategies to address these conservation and climate adaptation priorities can be most effective through landscape-scale initiatives to better capitalize on both our on-installation conservation programs and our off-installation conservation partnerships through the Readiness and Environmental Protection Integration (REPI) Program.

Readiness and Environmental Protection Integration (REPI) Program

The REPI Program safeguards military missions by improving installation resilience to extreme weather events and climactic changes, promoting compatible land use, and preserving critical habitats and natural resources near DOD installations and ranges. REPI is uniquely positioned to support DOD's ability to operate seamlessly across domains by stimulating mutually beneficial and cost-effective partnerships between local communities, Federal and state agencies, and non-governmental organizations. Through Fiscal Year 2022, the REPI Program has helped attract over \$1.1 billion in non-DOD partner contributions – nearly doubling DOD's investment – to protect over 1.1 million acres of land that is sustaining military mission at 120 installations in 35 states and territories.

Over the past year, the REPI Program has expanded project planning capacity and execution of projects in the Indo-Pacific region that promote installation resilience and is expanding innovative partnerships that support mission capabilities and enhance resource conservation and community benefits. For example, in Hawaii, the REPI Program invested over \$21 million in FY 2022 to address watershed health, mitigate climate risks, and preserve agriculture and culturally significant parcels, and will invest over \$26 million on similar Hawaiian partnership efforts in FY 2023.

The REPI Program also continues to support the interagency Sentinel Landscapes Partnership between DoD, the U.S. Department of Agriculture (USDA), and the U.S. Department of the Interior (DoI). The Partnership promotes shared land use priorities and works to advance conservation outcomes in landscapes across the country where national defense, sustainable agriculture and forestry, and community resilience to climate change intersect. Through FY 2021, DoD has led collaborative efforts with Federal, state, local, and private partners across ten Sentinel Landscapes to permanently protect over 610,000 acres of land and implement sustainable management practices on an additional 3.1 million acres. DoD continues to support the designation of new Sentinel Landscapes. For example, the REPI Program has joined with the Trust for Public Land in Hawaii to support a potential future Hawaii Sentinel Landscape designation.

The REPI Program has been identified in DoD's Climate Adaptation Plan as one of the key tools the Department will use to create resilient natural infrastructure solutions near installations and enhance climate adaptation. Through the National Fish and Wildlife Foundation's 2022 National Coastal Resilience Fund, the REPI Program contributed \$15 million to advance seven natural infrastructure projects that benefit DOD installations and ranges. These projects leverage significant additional funding from the National Oceanic and Atmospheric Administration and other partners to accelerate project outcomes that defend national security, maximize taxpayer benefits, and support sustainable land management practices.

In addition to enhancing critical mission capabilities and promoting resilience, many REPI projects support community-based conservation, recreation, and other quality of life programs. For example, Fort Harrison in Montana has partnered with the Prickly Pear Land Trust to expand the nationally recognized Peaks to Creeks Initiative, a community-driven effort to expand public

access to the region's waterways, open spaces, and trail networks. DoD plans to expand these types of opportunities in FY 2023 by partnering with the National Parks Service Land and Water Conservation Fund on a new notice of funding opportunity to conserve lands that increase public access and recreation while promoting compatible land uses aligned with local military missions and requirements.

TAKING CARE OF OUR PEOPLE

The Department of Defense's people are its greatest strength, and we are committed to ensuring that they have safe, healthy, efficient, and resilient places to live and work. These places should enhance the health, well-being, and readiness of our Service members, their families, and the communities that support them. We recognize that this requires us to be good stewards of the environment and good neighbors and partners with the communities that support our installations. As such, the Department must ensure that it has a robust environmental cleanup program to address the effects of releases of hazardous substances, pollutants, or contaminants into the environment. The Department must also maintain safe and efficient facilities and improve the quality of life for our military personnel and their families by ensuring access to safe, quality, and affordable housing where they will want and choose to live.

Defense Environmental Restoration Program

The Department must take deliberate and sustained action to address risks to human health and the environment resulting from DoD activities. Our environmental cleanup program includes the Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP). The IRP is focused on cleanup of hazardous substances, pollutants, and contaminants, while the MMRP is focused on responding to unexploded ordnance and munition constituents at former military ranges. These programs encompass active installations, Formerly Used Defense Sites (FUDS – sites that DoD transferred to other Federal agencies, states, local governments, or private landowners before October 17, 1986), and sites DoD transferred to other entities as part of its Base Realignment and Closure (BRAC) activities.

Progress Towards Cleanup Goals

To date, the Department, in cooperation with state agencies and the U.S. Environmental Protection Agency (EPA), has completed cleanup activities at 87 percent of Active and BRAC IRP and MMRP sites, and FUDS IRP sites, and is now monitoring the results. During FY2022 alone, the Department completed cleanup at 192 sites. Of the roughly 40,300 restoration sites, more than 34,200 are now in monitoring status or have completed cleanup.

Our focus remains on continuous improvement in the restoration program: minimizing overhead, adopting new technologies to reduce cost and accelerate cleanup, refining and standardizing our cost estimating, and improving our relationships with state regulators and affected communities through increased dialogue. These initiatives help ensure that we make the best use of our available resources to complete cleanup.

While the Department continues to make progress on completing cleanups, the remaining sites are some of the most complex cleanup sites. Chemicals of Emerging Concern and others like per- and polyfluoroalkyl substances (PFAS) continue to pose challenges for DoD's cleanup programs as new science requires reconsideration of previous decisions and more expensive solutions to protect our Service members, their families, communities, and the environment. Additionally, some complex sites have no feasible solution for cleanup and, as a result, the Department is making significant investments in environmental technology to identify new potential remediation methods.

Per- and Polyfluoroalkyl Substances

The presence of per- and polyfluoroalkyl substances (PFAS) in the environment is a national issue due to its wide-spread use in many industrial and consumer products. The Department recognizes the importance of this issue and is committed to addressing PFAS in a deliberative, holistic, and transparent manner. The Department established a PFAS Task Force in July 2019, and Congress codified it in statute last year. We are providing quarterly reports to you on the Task Force's activities. The Task Force continues to provide strategic leadership and direction on DoD-wide efforts, while focusing on four main goals:

- Mitigating and eliminating the use of the current aqueous film forming foam (AFFF);
- Fulfilling our cleanup responsibilities
- Understanding the impacts of PFAS on human health, and
- Expanding PFAS-related public outreach

In addition to these four focus areas, the Task Force has and continues to support substantial research efforts relating to PFAS and is establishing practices to ensure timely and complete dissemination of research findings and related data to the public.

Over the last year, the Department has made notable progress. For example:

- DoD has completed over half of its initial cleanup investigations for installations identified by the Department as locations where PFAS may have been used or potentially released.
- DoD has hosted several virtual PFAS public outreach meetings and is planning additional senior leader engagements, as well as site visits to impacted communities to gather input for more effective future outreach.
- DoD launched a new website that includes PFAS sampling results for drinking water taken in communities surrounding DoD installations.
- DoD's research and development efforts contributed to the development of a new Military Specification for a fluorine-free replacement to AFFF and have led to a total of 50 PFAS treatment technologies that have passed proof of concept and are further in development or the demonstration phase.
- The Military Departments are developing comprehensive plans for the transition to PFAS-free alternatives to AFFF and are evaluating available technologies, in addition to alternative foams, to replace AFFF systems in facilities.

AFFF Replacement Progress

Over the past few years, the Department has undertaken an aggressive initiative to develop and demonstrate PFAS-free alternatives for AFFF. A number of commercially-available and developmental PFAS-free alternative formulations have been demonstrated to achieve acceptable fire extinguishment performance. DoD has completed evaluations of the shelf life, materials compatibility, and general toxicity of these formulations and the Navy used these results to develop a new Military Specification – published January 12, 2023. The Military Departments are also evaluating available technologies, in addition to alternative foams, to replace current AFFF systems in facilities as part of the development of comprehensive plans detailing the transition to AFFF alternatives in both facilities and vehicles.

PFAS Cleanup and Drinking Water Mitigation

DoD follows the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the long-standing EPA regulations for all chemicals in our cleanup program, including PFAS. The Defense Environmental Restoration Program statute provides authorities to DoD to perform and fund cleanup actions and requires they be carried out in accordance with CERCLA.

As of December 31, 2022, the Department has completed the initial assessment at 405 (of 706) installations and of those, 101 were found to require no further action, while 304 are proceeding to the next step in the CERCLA process. During these initial assessments, DoD evaluates both groundwater and drinking water. If DoD identifies PFOS and/or PFOA from DoD activities in off-base drinking water above 70 parts per trillion, we quickly take action (i.e., a CERCLA removal action) to provide treatment or an alternative water source.

While the Department is making significant progress toward completing these initial assessments by December 2023, some additional work may be required as science develops and recommendations from our federal partners evolve. For example, in May 2022, EPA released new regional screening levels for certain PFAS. DoD is currently reevaluating several completed PA/SIs to assess if additional work is necessary based on these new values, which could affect DoD's timeline for completion.

The Department understands that the EPA is planning to propose a regulatory drinking water standard for certain PFAS under the Safe Drinking Water Act in early 2023. The Department looks forward to the clarity that a nationwide regulatory standard for PFOS and PFOA in drinking water will provide. In anticipation of this EPA drinking water regulation, and to account for emerging science that shows potential health effects from PFOS and PFOA at levels lower than 70 parts per trillion (ppt), the Department is evaluating its efforts to address PFAS in drinking water. This includes assessing what actions DoD can take to be prepared to incorporate EPA's future regulatory standard into our current cleanup process, such as reviewing our existing data and conducting additional sampling where necessary. In addition, DoD will incorporate nationwide PFAS cleanup guidance, issued by EPA and applicable to all owners and operators under CERCLA, as to when to provide alternate water when PFAS are present.

In addition, as part of our normal operations, the Department has sampled over 500 on-base DoD drinking water systems worldwide. Of those, we identified 37 with PFOS and/or PFOA above 70 ppt and took quick action to bring those systems below 70 ppt. Where DoD is the known source of PFOS and/or PFOA in drinking water, DoD has taken steps to ensure that no one is drinking water above 70 ppt.

PFAS Public Outreach

The Department is committed to expanding our outreach efforts as we continue to address PFAS. As the Chair of the PFAS Task Force, I will ensure that I am actively engaged in these efforts. DoD is developing an overarching PFAS communication strategy to include communication products that will explain DoD's cleanup activities in a comprehensible and transparent manner. These efforts will ensure a cohesive and collaborative approach to communication and messaging across DoD and drive consistent messaging across all communication platforms. DoD will also conduct community interviews and is finalizing locations to be visited this spring and summer.

Chemicals in the Defense Supply Chain

The pressure from expanding international and domestic emerging chemical regulations places an unknown risk to the Department's readiness. These new and evolving regulatory requirements, which can prohibit the manufacture and use of chemicals, may result in the loss of access to mission critical products. There are numerous chemicals under increased oversight including, but not limited to, hydrofluorocarbons (HFC), chlorinated solvents, and PFAS. As an example, some PFAS compounds are critical to the safe and effective operation of a range of military items from radars to missile guidance systems, medical devices, and jet engines. The full effects of any ban, whether required by law or a voluntary business decision, are not yet known, but could be both costly to address and likely to leave the Department dependent on supplies from countries like India and China. Building on past successes the Department is working with regulatory agencies and private industry to develop strategies to address these concerns, starting with identifying PFAS products essential to national security and developing mitigation plans.

Housing

Family and Unaccompanied Housing

As the Department's Chief Housing Officer, I recognize that the environment in which our Service members live impacts their quality of life, their ability to do their job, and our ability to recruit and retain the force. I am committed to ensuring that all DoD housing for our members—whether it is government-owned, government-leased, or privatized—meets life, health, and safety requirements and provides a positive living experience for military personnel and their families.

The Military Departments have privatized 99 percent (approximately 205,000 units) of their U.S. family housing inventory, as well as 4,700 unaccompanied housing (UH) apartment units (8,500 bedspaces) on their installations in the U.S. The Department also owns, operates, and maintains

approximately 35,000 family housing units, most of which are on enduring bases in overseas locations, and leases about 5,600 family housing units where government-owned or privatized housing is unavailable. The Department's housing inventory also includes approximately 523,000 government-owned permanent party unaccompanied housing (UH) bed spaces, and more than 2,000 government-leased UH bed spaces.

Going forward, the Department will invest in DoD's government-owned and government-leased housing based on the need to support mission requirements, address health and safety concerns, and modernize unaccompanied personnel housing to provide improved privacy and greater amenities for junior personnel. We will continue to fund the Department's oversight to ensure that privatized housing projects deliver safe, high quality housing, to include continued funding for more than 600 additional government housing personnel hired since Fiscal Year 202. Finally, we will make investments to support the necessary restructure of financially-challenged Military Housing Privatization Initiative (MHPI) projects to ensure that they can meet sustainment needs and deliver quality housing over the long-term.

Military Housing Privatization Initiative (MHPI)

The Department has made significant progress implementing actions to enhance the MHPI program and our oversight of the private sector MHPI companies that own and operate MHPI housing projects. As Congress has recognized, applying many of the Tenant rights at existing MHPI housing projects requires voluntary agreement by the MHPI companies; the Department cannot unilaterally change the terms of the complex, public-private partnerships that established the MHPI housing projects. Nevertheless, as a result of our collaboration with the private-sector MHPI companies, all 18 rights set out in the MHPI Tenant Bill of Rights are fully available at all but three of the nearly 200 installations with privatized housing, representing approximately 97 percent of military families residing in MHPI housing. The remaining three installations provide 15 of the 18 rights, but do not yet provide the MHPI Tenant Rights to seven-year maintenance histories, dispute resolution, or rent segregation the MHPI companies on these installations remain fully compliant with their MHPI project legal agreements with the Military Departments and associated state and local landlord requirements. The Department continues to seek voluntary agreement of the remaining three MHPI companies by working to resolve their remaining concerns and achieve full implementation of the 18 Tenant Rights.

The Tenant Bill of Rights is one of DoD's most visible improvements to enhance the MHPI program, rebuild trust, and reinvigorate DoD oversight, but we have also implemented numerous policies, guidance, and procedures to enhance the Department's oversight of the MHPI program, to include:

- Establishing quarterly programmatic reviews with each of the Military Departments;
- Uniform housing standards and inspection requirements; and
- Improved metrics to gauge performance by the MHPI companies.

Further, the Military Departments have also implemented several measures to strengthen their oversight and hold privatized housing companies accountable, to include:

- Reinforcing installation commander responsibility for day-to-day oversight of housing quality and service provided by the MHPI projects;

- Improving training for commanders and housing staff at all levels of the organization;
- Hiring more than 600 additional government housing-related staff and establishing housing councils and resident advocates;
- Reviewing project business practices to identify and pursue needed corrective actions;
- Working with MHPI companies to revise project performance incentive fee metrics;
- Establishing housing standards and inspection requirements, to include installation inspection and approve of all MHPI housing units before each change of occupancy;
- Improving communication with residents and the annual tenant satisfaction survey;
- Requiring MHPI projects to implement electronic work order systems to increase transparency and reporting of maintenance and repair work orders;
- Establishing policies and procedures for health hazard assessments and mitigation;
- Refining internal departmental oversight practices.

We will continue to prioritize implementation of key MHPI reforms that improve the safety, quality, and maintenance of privatized housing. We will also continue to ensure accountability at all levels within DoD and the MHPI companies as necessary to enforce performance standards, deliver a positive living experience for Service members and their families, and ensure the long-term success of the MHPI projects and program. This includes taking appropriate action to hold MHPI companies accountable for project performance, problems with property management, or inappropriate business practices.

The Department of Defense is committed to working closely with you and the committee staff to ensure the long-term success of the MHPI program and we will remain diligent in our oversight to ensure DoD's privatized housing projects deliver quality housing and a positive living experience for military personnel and their families.

Environmental Justice

The Department recognizes the importance of environmental stewardship as well as the disproportionate burden that pollution places on certain communities. Indeed, fully 39% of DoD installations are in or adjacent to Environmental Justice communities, these being communities that face disproportionate burdens of pollution and environmental degradation. These communities are where our Service members live, relax, and send their children to school. Since 1994, the Department has implemented an Environmental Justice Strategy that address enhancements to community engagement and Tribal consultation, environmental planning, and implementation processes including clean-up and restoration activities. The Military Departments have revised their respective policies and guidance to improve early engagement with disadvantaged communities and consultation with Tribal Nations as a result of Federal actions. In partnership with the Council on Environmental Quality, the Environmental Protection Agency, and other Federal agencies, we continue to develop tools to enhance our mapping and analysis of potential environmental and climate change impacts to communities. The Department is fully prepared to continue to address Environmental Justice by ensuring equality in our investments in military communities, implementing top-down training for Service members and civilian specialists in Environmental Justice literacy, strengthening government-to-government relations with Tribal Nations, and by leveraging existing public-private partnerships to support infrastructure and environmental enhancements in communities adjacent to the Department's

installations. The Department believes that to sustain the defense mission we must work in concert with local communities and build trust through partnerships that safeguard healthy, secure, and vibrant natural and human environments for our neighbors, our Service members, and their families.

OTHER PROGRAMS

The Office of Local Defense Community Cooperation

The Office of Local Defense Community Cooperation (OLDCC), in coordination with the other Federal agencies, delivers a program of technical and financial assistance to enable states, territories, and communities to plan and carry out civilian responses to workforce, business, and community needs arising from Defense actions; cooperate with their military installations and leverage public and private capabilities to deliver public infrastructure and services to enhance the military mission; achieve facility and infrastructure savings, as well as reduced operating costs; increase military, civilian, and industrial readiness and resiliency; and support military families.

OLDCC's program portfolio is presently comprised of approximately 300 separate obligations, exceeding \$1.8 billion and represents partnerships between the Department and most states, territories and communities that host Department of Defense installations.

The OLDCC Installation Resilience Program assists states, territories, and communities to respond to man-made or natural threats as "one community," taking care to remain compliant with the consultation requirement between communities and their local installations as set forth in section 2801 of the Fiscal Year 2020 National Defense Authorization Act. This effort includes tabletop exercises to model out threats to gauge civilian and uniformed first responders alike to enhance the public and private infrastructure and services necessary to sustain our installations and communities. This program necessarily also looks at housing and its resiliency for Service members and their dependents through targeted business-case studies and planning activities.

The Diversification and Modernization Program provides states, territories, and communities the ability to review local industrial base and installation defense dependencies, seeking to deliver results when needed for the Department at the speed of relevancy. This program enables an assessment of community, workforce, and business capabilities, and then an assessment of options to deliver workforce development/training, transportation, and other infrastructure investments to address future needs of installations and the industrial base, education system improvements, and housing availability in tandem with emerging defense priorities.

The Defense Community Infrastructure Pilot Program responds to deficiencies in community infrastructure around military installations. This program aims to enhance military value, cadet training at covered educational institutions, installation resilience, and military family quality of life. OLDCC expects to seamlessly incorporate program changes from the Fiscal Year 2023 National Defense Authorization Act, posting a notice for funding opportunity shortly, and hosting webinars to help communities to better understand and navigate these program changes.

Military Aviation and Installation Assurance Siting Clearinghouse

The Military Aviation and Installation Assurance Siting Clearinghouse continues to protect the Department's ability to train, test, and operate as the nation expands its renewable and other commercial energy and power transmission capacity. Among these energy projects, commercial wind development typically poses the greatest compatibility challenge to DoD due to physical obstruction of low-level flight routes and electromagnetic interference with DoD radar systems. DoD resolves project concerns through collaboration between the Clearinghouse, the Military Departments, local communities, states, and energy developers, thereby maintaining the Department's ability to train, test, and operate while enabling development of alternative energy resources. The Clearinghouse negotiates Mitigation Agreements with wind energy developers to minimize the impacts from proposed projects on DoD missions.

The Department works with the Department of Interior, the Bureau of Ocean Energy Management (BOEM) and states to create plans that support aggressive new offshore energy development goals. The Department works with its Federal, state and industry partners at every stage of planning, permitting, and development. DoD has worked on a solution that allows BOEM to plan towards 3GW of wind generation off the coast of Central California. While this development will constrain some DoD operations, the White House Climate Office, DOI and California agreed to find a balanced solution that allows this Central Coast wind development, while also providing long-term protections against further development in the area. This compromise supports domestic renewable energy goals while providing long-term protections for military operations. DoD has also collaborated in offshore development planning throughout the Atlantic, Pacific, and Gulf of Mexico. In each case, the Department collaborates to protect national security while allowing compatible development.

The Department is actively implementing new approaches to protect DoD missions. The Clearinghouse intensified efforts to advocate for state-level legislation to protect military installations and operations from incompatible wind energy development. Oklahoma, Indiana, Wyoming, and Alabama have passed protections for military missions in wind turbine permitting. Although DoD and developers have had success resolving issues related to incompatible energy development, state support is invaluable in the rare cases where developers choose not to voluntarily coordinate with DoD.

Native American Lands Environmental Mitigation Program

The Native American Lands Environmental Mitigation Program (NALEMP), codified under the FY2021 NDAA, addresses environmental effects of Department actions on Indian lands and on other locations where the Department, an Indian tribe, and the current landowner agree that such mitigation is appropriate. These environmental effects are typically associated with hazardous materials, munitions debris, underground fuel storage tanks, unsafe buildings, lead-based paint and asbestos, and abandoned equipment. Most Indian lands are located in rural and remote areas with low population densities; thus, they might not qualify as high priority sites under the Department's more limited environmental restoration programs. The NALEMP seeks to bridge

the gap between Tribal needs and these traditional risk-based environmental restoration programs and incorporate Tribal priorities to address potential impacts to Indian lands.

To date, over one-hundred sites in the lower 48 states and Alaska have been fully mitigated. Ninety-five percent of the 1,158 potential Tribal impacts reported to the Department have been assessed and 158 have been found eligible for NALEMP and 138 impacts are under review. In FY2022, the Department executed a total of 13 NALEMP CAs, of which 10 CAs were with Alaska Native tribes and three with American Indian tribes in the lower 48. By the end of FY 2023, the Department will execute an additional 14 CAs, of which nine CAs will be with Alaska Native tribes and five American Indian tribes in the lower 48 states.

CONCLUSION

Thank you for the opportunity to discuss DoD's programs supporting energy, installations, and environment. We appreciate Congress' continued support for our enterprise and look forward to working with you.