# ARMY ENVIRONMENT, SAFETY, & OCCUPATIONAL HEALTH STRATEGY 2025















SGT Jaquez Jones, an infantryman and the acting range safety officer, observes as paratroopers, all assigned to Delta Company, 2nd Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade Combat Team, use a smoke grenade for concealment while participating in a dismounted foot patrol during the unit's cumulative fire training event as part of Operation Atlantic Resolve in Wedrzyn, Poland, Nov. 30, 2016.

The U.S. and partner nations conducted land, sea and air exercises and maintained a rotational presence in order to reinforce NATO security commitments in Europe. (U.S. Army photo by SGT William A. Tanner)

COVER IMAGES (from left to right), photo by USAF Master Sgt. Scott Thompson, U.S. Army photo, photo by Audubon Society, U.S. Army photo



The estimated cost of this report or study for the Department of Defense (DoD) is approximately \$40,000 in Fiscal Year 2016-2017. This includes \$16,000 in expenses and \$24,000 in DoD labor.



## DEPARTMENT OF THE ARMY WASHINGTON

## Leadership Letter

Each day, the United States Army stands proud, ready to protect this Nation and its people, in a world full of uncertainty. It is our duty, as leaders, to ensure our Soldiers have the environmental assets necessary for military readiness and a safe, healthy environment.

The framework provided in this Army Environment, Safety, and Occupational Health (ESOH) Strategy 2025 facilitates the Army's mission and supports top-level strategic objectives. It establishes standards that improve Army readiness, safety, and well-being. This document builds on the Office of the Assistant Secretary of the Army for Installations, Energy, and Environment Strategy 2025 and provides methods the Army can use to position itself for continued success. As threats continue to emerge, environmental factors, risk management, proper reporting, and data analysis remain imperative. Identifying key policy requirements is critical to the Army's global leadership and meeting our mission goals.

The American people have entrusted the Army to maintain a skilled, ethical, and combat-hardened fighting force—a commitment the Army does not take lightly. Developing our future Army, however, demands that we work continuously to improve and maintain our status as the world's premier combat force. This strategy upholds our commitment to sustaining readiness, preparing the future Army, and taking care of our troops.

Katherine Hammack

Assistant Secretary of the Army Installations, Energy, and Environment

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Date



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SPC Ethan Mitchell, right, points out the objective location to SPC Raymon Najera during a live-fire exercise in Konotop, Poland, 18JAN2016. Both are infantrymen assigned to the 3rd Squadron, 2nd Cavalry Regiment. Army photo by SGT Paige Behringer.

#### I. INTRODUCTION

Today, our Army is a force simultaneously in transition, in action, and in preparation. As an Army in transition, the Army is returning and recovering from almost 15 years of sustained deployments in support of combat operations in Iraq and Afghanistan. At the same time, the Army is in continuous action. The Army supports combat operations, enables humanitarian assistance efforts by other U.S. government agencies, assists its partners around the world to develop professional and capable armies, supports domestic civil authorities through disaster relief, and furthers national military objectives in the Pacific. Finally, as an Army in preparation, we are developing leaders capable of operating in complex environments and training units and Soldiers to respond to emergent missions and future threats.

Our Army also stands at a turning point. Emerging from 14 years of conflict, facing significant budgetary pressures, and confronted with an increasingly complex security environment, we must determine

what kind of Army the Nation will need for the future. As a goal, the Army of 2016 must evolve to meet the demands of 2025 and beyond. As key providers of the services and capabilities, the Environmental, Safety, and Occupational Health (ESOH) community must adopt a strategy that keeps pace with this transition.

The Army ESOH Strategy 2025 reinforces the Office of the Assistant Secretary of the Army Installations, Energy, and Environment (OASA(IE&E)) Strategy 2025<sup>1</sup>, which provides the foundation and vision to proactively support the Army as it transitions, adapts, and improves to meet the demands of the future. The Army ESOH Strategy 2025 provides a holistic strategy for incorporating ESOH policies and programs to support the Army's critical mission and regulatory requirements.

Moving toward this vision of the future will not be easy. Prioritizing competing requirements is the challenge of every resource-constrained organization. Every choice we make to transform entails some degree of risk; however, the risks and consequences of not changing are far greater.

<sup>&</sup>lt;sup>1</sup> \*The Army ESOH Strategy 2025, replaces and updates the 2003 Army Environmental Cleanup Program Strategy, the 2004 Army Strategy for the Environment, and the 2010 Army Safety and Occupational Health Strategic Plan. It provides a consolidated and holistic approach to ESOH strategy.

#### II. PURPOSE

To keep pace with emerging global threats, the Army must set strategic priorities that ensure it is ready to rapidly respond to prevent conflict, shape security environments, and win wars where the enemy, location, and coalition partners are unknown. The OASA(IE&E) Strategy 2025 establishes the Army's overarching strategic vision for installations, energy, and the environment and aligns to national, Department of Defense (DoD), and Army strategic priorities. The Army ESOH Strategy 2025 expands and complements OASA(IE&E) Strategy 2025 by ensuring the Army is ready, resilient, and capable of defending our Nation while being a strong partner and a Federal agency leader in the ESOH community.

The Army ESOH Strategy 2025 provides a strategic framework that supports Army's top-level objectives which guide and shape ESOH Program as defined in Army Regulation (AR) 200-1 (Environmental

Protection and
Enhancement), AR
385-10 (The Army
Safety Program), and
AR 40-5 (Preventive
Medicine), and for
ESOH considerations at
garrison and contingency
locations as defined in AR
11-35 (Occupational and
Environmental Health
Risk Management).

New Directions: The
Army ESOH Strategy 2025
introduces a strategic
design for a new program
that will continue the
Army's effort to improve and
sustain its mission performance through
a mission-focused manner that balances

requirements with capabilities and limited resources levels. This strategy also establishes a paradigm that views environmental resources as mission-enabling assets that are the foundation of a ready, proficient, and resilient Army. This paradigm transforms the costs of environmental compliance into investments that improve the Army's operational capability and provide a direct linkage among an enhanced vision, mission, and major program objectives. It also positions the Army to remain ready and capable. The Army ESOH Strategy 2025 introduces the synchronization of safety and health in the workplace, yielding measurable benefits. This alignment will further drive synergies in the use of risk assessment, medical surveillance examinations, safety training, safety engineering, workplace wellness programs, and total worker health. By maintaining the health of Soldiers and employees, health-related costs decrease while work productivity and mission support increases.

# Army Environment, Safety & Occupational Health (ESOH) Program

- The means by which the Army informs and engages partners of its ESOH programs, Federal and State environmental regulators, and affected stakeholders.
- It is also a commitment to the health and well-being of Soldiers, their Families, Department of the Army Civilians (DAC), contractors, and the communities surrounding Army installations.

E S O H

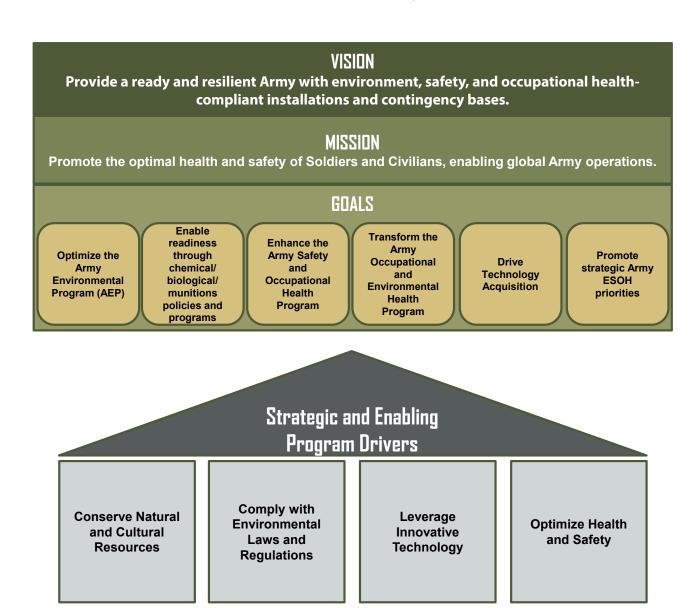
#### III. VISION AND MISSION

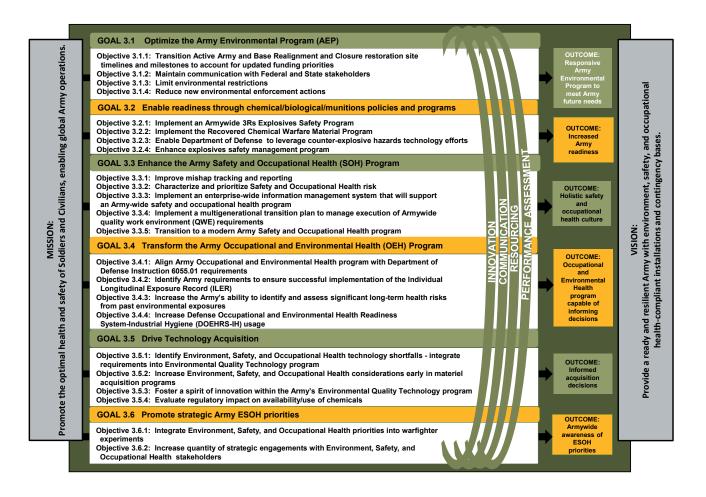
To support those the Army serves, the Army's ESOH Vision and Mission focuses on readiness by providing strategic direction and oversight of its environmental statutory compliance and stewardship obligations, while effectively applying safety and health policies. The vision relates our desired ESOH end state and the mission statement serves as the benchmark for subsequent actions under each line of effort:

VISION: To provide a ready and resilient Army with environment, safety, and occupational health-compliant installations and contingency bases. This vision will improve Army operations, readiness, materiel production, and enhance war-fighting weapons systems, while maintaining a high safety standard for Army Soldiers and their Families, Civilians, contractors, and communities surrounding Army Installations.

MISSION: To promote the optimal health and safety of Soldiers and Civilians, enabling global Army operations.

We must ensure compliance of environment, safety, and occupational health statutes and regulations as stewards of those we serve and land we use to sustain the Army's mission.





#### IV. STRATEGIC DESIGN

**Scope:** The Installations, Energy, and Environment Strategy 2025 was amended in 2016. The Office of the Deputy Assistant Secretary of the Army (ODASA) (ESOH) refined the strategic direction of the ESOH program, modified vision, mission, goals, and objectives, and codified performance metrics. The resulting ESOH Strategic Design, nested within the ASA(IE&E) Strategic Design, is portrayed above:

New Army Environment, Safety, and Occupational Health Strategic Design

These key lines of effort enable readiness by:

- Ensuring Army compliance with legal and regulatory requirements;
- Being nationally recognized for quality safety and occupational and environmental health programs through the Voluntary Protection Program and the Corporate Health Achievement Award;

- Conserving natural and cultural resource assets as mission enablers;
- Addressing concerns of federally recognized Indian Tribes, Alaska Natives, and Native Hawaiians;
- Implementing environmental clean-up; and
- Providing innovative environmental technologies that support materiel production at industrial facilities, installation management, and pollution prevention.

**Goals:** The goals are the outcomes and results of the structural, organizational, and process changes that will move the Army forward to its desired end state and fulfill the ESOH vision.

**Objectives:** The objectives under each line of effort focus on actions that the Army will actively pursue to reach the Army's ESOH vision and successfully accomplish its mission. Objectives are the impetus

for converting the Army's ESOH mission statement into more specific actionable plans and activities. The Army's leadership use these objectives, which set benchmarks for success, to guide decision-making.

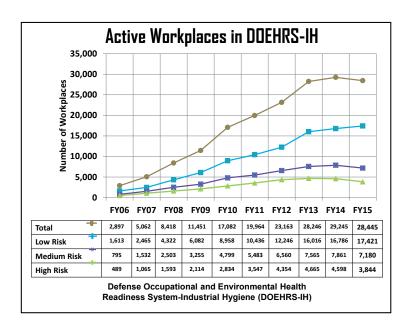
Innovation: Innovation is embodied in our Environmental Technology Program and a critical enabler to the Army's success. Through separate administrative mechanisms, ESOH identifies potential innovations for research, development, testing, and ultimately fielding to the Army's warfighting team. The Army invests in environment, safety, and occupational health technologies and methodologies that increase our rate of innovation and demonstrate a high return on investment.

**Communication:** The Army maintains communication with external stakeholders to ensure that Army activities and information are transmitted in an accurate and timely manner. Communication and partnering with local, State, and Federal agencies, industry, non-governmental organizations, academia, and communities surrounding Army installations is a long-standing practice for Army ESOH. Through its partnerships, the Army is able to solve shared challenges, develop effective technologies and solutions, and enhance the wellbeing of our Soldiers and their Families, Civilians, contractors, and the communities surrounding Army installations. Through an effective communication strategy, the Army demonstrates transparency and accountability while building a stronger Army by inculcating an ESOH ethic at every level.

**Resourcing:** The Army must continually evolve the ways in which it operates to identify alternate service delivery paths, manage costs, and achieve high return on investments to ensure every dollar counts in executing the Army's highest priorities. The resourcing of ESOH priorities will be informed through the Army's end state goals, policy, guidance,

and decisions conveyed in development guidance documents such as the Army Planning Priorities Guidance and the Installations Program Evaluation Group Program Objective Memorandum (POM). Effective use of the POM process, critical to successful resourcing, puts the Army on solid ground when defending its ESOH requirements before the Office of Secretary of Defense and the United States Congress. Effective cost management provides Army organizations with the ability to identify, quantify, and value the economic benefits and related costs of ESOH program alternatives, which leads to a more efficient and effective environmental stewardship.

Performance Assessment: The Army conducts annual ESOH performance assessments as a holistic recurring activity that evaluates the effectiveness of its programs. Measuring program performance through metrics is vital to achievement, which provides an objective characterization of how successfully the Army is moving toward reaching its vision and attaining major objectives. Army commands, Army service component commands, and direct reporting units develop specific, measurable, and attainable targets to monitor their progress toward meeting this strategy's goals and major objectives.



#### V. GOALS AND OBJECTIVES

Army ESOH goals and objectives maintain an effective environmental stewardship program and a safety-based culture for Soldiers and their Families, Civilians, contractors, and communities surrounding Army installations. These goals and objectives also contribute to a stronger, ready, and responsive fighting force. Goals establish where we intend to go and tell us when we get there. The objectives of goals 3.1 - 3.6 identify the specific steps the Army will take in order to attain the ESOH goals.

#### **GOAL 3.1. OPTIMIZE THE ARMY ENVIRONMENTAL PROGRAM**

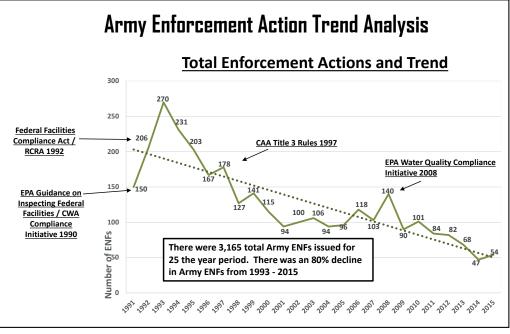
This goal and supporting objectives optimize the

environmental program to ensure that Army installations and facilities comply with environmental laws; reduce enforcement actions; conserve natural and cultural resources; and address the concerns of federally recognized **Native American Tribes** and Native Hawaiians in a manner that does not limit access to military training and testing areas, and implement environmental clean-up

on active Army and base realignment and closure (BRAC) sites. The Army uses a risk-based approach to identify and prioritize sites to clean up that represent the greatest threat to human health and the environment and to allow safe and timely return of property for installation use.

Enforcement actions (ENFs) are key measures of Army environmental program performance that are officially reported to Congress on an

annual basis. Enforcement actions include notices of violation and compliance orders issued by authorized environmental regulatory agencies when environmental violations are observed. The Army's objective established in support of the OASA(IE&E) Strategy 2025 is to maintain an enforcement action rate of 10 percent or less annually. A low enforcement action rate limits financial liabilities from fines and penalties and associated mission impacts. Despite a declining Army environmental compliance program budget, this objective has been achieved for fiscal years 2013-2015, and is a testament to the effectiveness of Army installation environmental program managers. To maintain an enforcement action rate of 10 percent or less, Army



land-holding commands, direct reporting units, and installations will: adjust operational procedures when new legal environmental requirements arise, implement an environmental management system at their installations where determined to be effective by the installation, focus environmental compliance assessments on areas at high risk for enforcement actions, and continue to strengthen regional and State partnerships to help prevent enforcement actions.

#### **GOAL 3.1. OBJECTIVES:**

**OBJECTIVE 3.1.1.** Transition Active Army and BRAC restoration site timelines and milestones to account for reduced funding.

Performance Measure 3.1.1: Weighted average of performance indicators established on a 2-year cycle for cleanup program managers. Target: 90 percent by 2018, 95 percent by 2021.

**OBJECTIVE 3.1.2.** Maintain communication with Federal and State environmental regulators and affected communities to ensure that Army activities and information are transmitted in an accurate and timely manner.

Performance Measure 3.1.2: Participate in Defense and State Memorandum of Agreement (DSMOA) and Munitions Response Dialog (MRD) meetings. Target: 100 percent by 2025.

**OBJECTIVE 3.1.3.** Limit environmental restrictions that impact military access to required training and testing areas.

Performance Measure 3.1.3: Percentage of endangered species critical habitat- acres designated on Army installations. Target: Less than 10 percent.

**OBJECTIVE 3.1.4.** Reduce new environmental ENF from regulatory agencies.

Performance Measure 3.1.4: Annual ENF rate of 10 percent or less to limit financial liabilities and mission impacts to the Army. Target: Less than 10 percent.

From left, SPC Zachery Dechant, SFC Andrew Olson and SPC Christopher McLaughlin, all explosive ordnance disposal technicians with the 663rd Ordnance Company, Combined Joint Task Force Paladin-East, place recoilless rifle rounds and mortar rounds into a trench in preparation for a controlled detonation Sept. 30, 2013, at a range near Bagram Airfield, Afghanistan. The Soldiers destroyed more than 600 pounds of old, recovered and captured munitions, with support during the operation from U.S. Air Force security forces personnel. (DoD photo by Ed Drohan/Released)

## GOAL 3.2. ENABLE READINESS THROUGH CHEMICAL/BIOLOGICAL/MUNITIONS POLICIES AND PROGRAMS

Throughout history, our Nation's ability to maintain a well-trained military force has required the use of military munitions during live-fire training and testing and the demilitarization of excess, obsolete, or unserviceable munitions. These munitions-related activities have often resulted in the presence of military munitions in areas currently or formerly used by the military.

The Army and DoD recognize their responsibility to protect the public from the potential hazards associated with military operations, both past and present. The Army implements cleanup programs to restore property that contains military munitions that may pose a significant explosive hazard to the public to a condition that is protective of human health and the environment and sustains mission capability. Of particular concern is the presence of military munitions, particularly unexploded ordnance (UXO) or chemical warfare materiel (i.e., chemical munitions and chemical agents in bulk containers), that may pose a significant explosive hazard to the public.

Given the potential explosive hazards posed by the presence of military munitions, the Army has implemented a robust education and outreach program. The Army's 3Rs (Recognize, Retreat, Report) explosives safety program is designed to be easy to remember and educate military personnel and Civilians alike about the potential hazards associated with munitions and the actions to take should they encounter or suspect they have encountered a munition. The 3Rs message is (1) Recognize — when you may have encountered a munition and that munitions are dangerous; (2) Retreat — do not approach, touch, move, or disturb it, but carefully move away; (3) Report — call 911 and advise local law enforcement what you saw and where you saw it.







Explosives safety education has been determined to be an effective risk mitigation tool. As such, the Army is continuously improving its 3Rs

explosives safety education to target the general public, specific activities (e.g., outdoor recreation), and industries (e.g., construction). The Army recently began working with Active and National Guard installations to design installation-specific 3Rs programs. (See http://www.denix.osd.mil/uxo/.)

DoD assigned to the Army the responsibility for implementing the DoD's Recovered Chemical Warfare Material Program in 2008. The Army, working with the Office of the Secretary of Defense and its sister Services, is doing this in a manner that provides for consistency in approach, avoids duplicating programs, and aids in the efficient use of limited resources. Most importantly, the Army's efforts focus on protecting its workers and the public from the risk posed by chemical warfare material.

The Army also has responsibility for the Unexploded Ordnance Center of Excellence (UXOCoE). The UXOCoE serves as DoD's centralized clearinghouse for Research, Development, Test, and Evaluation (RDT&E) for technologies being considered to meet DoD requirements to deal with explosives hazards, such as UXO, improvised explosive devices, and mines. The UXOCoE focuses available resources on ensuring required capabilities are met, while avoiding duplication of effort.

The Army has recently implemented an enduring campaign with an objective of making improvements to strengths and addressing weaknesses identified by internal and external inspections of the Army's Explosives Safety Management Program (ESMP). The

intent is to ensure Army commanders at every level establish effective and comprehensive ESMP that each subordinate command sustains and implements.

#### Goal 3.2. Objectives:

**OBJECTIVE 3.2.1.** Implement an Armywide 3Rs Explosives Safety Program.

Performance Measure 3.2.1.a: Number of explosives or munitions emergencies requested as result of public encounter with munitions. Target: 1 or less.

Performance Measure 3.2.1.b: Percentage of installations that adopt and implement results of 3Rs Pilot Program. Target: 85 percent by 2025.

Performance Measure 3.2.1.c: Percentage of regulator and public acceptance of Integrated Resource Management (IRM) activities. Target: 85 percent by 2025.

**OBJECTIVE 3.2.2.** Implement the Recovered Chemical Warfare Material Program.

*Performance Measure 3.2.2:* Percentage of required policy documents published and current that address RCWMP. Target: 100 percent by 2025.

**OBJECTIVE 3.2.3.** Enable DoD to leverage counterexplosive hazards (C-EH) technology efforts within other Federal, academic, and industrial organizations.

Performance Measure 3.2.3: Cost avoidance of not duplicating C-EH research. Target: Savings greater than cost of UXOCoE program.

**OBJECTIVE 3.2.4.** Enhance explosives safety management program.

Performance Measure 3.2.4: Correlation of percentage of Ammunition Logistics Management Reviews and Explosives Safety Assistance Visit results. Target: 80 percent by 2025.



An Army Ranger fires an M4 carbine during close quarter marksmanship qualifications at a range on Fort Hunter Liggett, Calif., Jan. 25, 2014. Credit: U.S. Army Photo by SPC Steven Hitchcock

## GOAL 3.3. ENHANCE THE ARMY SAFETY AND OCCUPATIONAL HEALTH (SOH) PROGRAM

Given today's global challenges and future uncertainty, preserving and protecting personnel and materiel resources is essential in maximizing readiness to accomplish today's missions and helps build an agile, adaptive Army for the future. Commanders are responsible for everything their command does or fails to do. Therefore, our Army's SOH program is an enduring commander's program.

The Office of the Secretary of Defense mandates that each agency and military department establish a SOH management program that synchronizes safety and occupational health activities. This mandate reflects the need to do more than compliance and establishes the goal to enhance the Army's SOH program.

To achieve this goal and provide commanders with the capabilities they need to make timely, informed decisions based on risk, the Army is working to establish a modern SOH management system by enhancing the existing Army Safety and Occupational Health Management System to include the Quality Work Environment (QWE) Assessment framework, American National Standards Institute/American Industrial Hygiene Association Occupational Health and Safety Management Systems standards, and emerging OSHA and international standards. This will require definition of elements, performance standards, and business processes using DoD frameworks (i.e., doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy). The subsequent requirements identified through this rigorous process will drive requirements for future information, data, and information technology systems support. The SOH management system will build into current programs, adding continuous improvement processes by combining engaged leadership and personnel involvement, worksite analysis, hazard prevention and control, and safety and health training to produce safety and health excellence.

Through efficient oversight we will improve the Army's SOH program. The SOH Senior Executive Council (SEC) will provide the Secretary of the Army, Chief of Staff of the Army, the Designated Agency Safety and Occupational Health Official, and Headquarters, Department of the Army with a single intra-Army committee to facilitate oversight of all Army safety and occupational health matters. This governance process will ensure compliance with public law, adherence to Army regulations, and effective integration of SOH strategy, policy, priorities, and requirements.

Mission effectiveness and resilience will be enhanced by ensuring the physical environment and work processes protect Soldiers, Civilians, and Families. Integrating QWE methodologies into Army policies and regulations will provide commanders at all levels with a holistic picture of their facilities to assess root causes of mishaps and to prioritize processes to prevent recurrences. Institutionalizing QWE methodologies across the Army will require a different way of doing business and will change the Army's organizational culture and its policies. Investments made to address findings and recommendations will reduce the likelihood of preventable workplace injuries and illnesses from occurring, reducing mishap costs and lost time.

The Army's commitment to the Warrior Ethos, "I will never leave a fallen comrade," is demonstrated through our efforts to protect our Soldiers and Civilians by mitigating risk of occupational injuries, illnesses, and their associated cost. SOH and workers' compensation program management will require active leader involvement as the Army strives to return Soldiers and Civilians to duty as soon as they are medically able. This involves our full support of Presidential return to work initiatives and performance targets established by the Department of Labor.

Protecting Soldiers, Civilians, equipment, and facilities from mishaps and damage is not only a legal and ethical duty — it is integral to maintaining current readiness and maximizing our capabilities to address future challenges.

#### Goal 3.3. Objectives:

**OBJECTIVE 3.3.1.** Improve mishap tracking and reporting through the Army Safety and Occupational Health Management System in support of the annual report to the Department of Labor.

Performance Measure 3.3.1: Percentage of unaddressed findings and recommendations documented during mishap investigations. Target: 10 percent or less by 2025.

**OBJECTIVE 3.3.2.** Characterize and prioritize SOH risk structure to minimize loss and protect from injuries, illness, and damage to equipment/facilities.

Performance Measure 3.3.2: Percentage of unaddressed workplace safety and occupational health violations that are over 90 days old; identified during mishap investigations and leader safety walkthroughs. Target: 10 percent or less by 2025.

**OBJECTIVE 3.3.3.** Implement an enterprise-wide information management system that will support an Armywide safety and occupational health program.

Performance Measure 3.3.3: Percentage of the 26 SOH functions operating on an information technology system of record. Target: 90 percent by 2025.

**OBJECTIVE 3.3.4.** Implement a multigenerational transition plan to manage execution of Armywide QWE assessments.

Performance Measure 3.3.4: Percentage of revised standards incorporated Armywide related to QWE program findings and recommendations. Target: 90 percent by 2025.

**OBJECTIVE 3.3.5.** Transition to a modern Army safety and occupational health program.

Performance Measure 3.3.5: Percentage of recommended Business Process Re-engineering tasks implemented in relation to DODI 6055.01 and revision of the Army safety and occupational health program. Target: 100 percent by 2025.

GOAL 3.4. TRANSFORM THE ARMY OCCUPATIONAL AND ENVIRONMENTAL HEALTH (OEH) PROGRAM The Army Occupational and Environmental Health (OEH) mission is to enhance Army readiness by identifying and assessing current and emerging health threats, reducing potential and actual exposures from occupational and environmental hazards encountered during all military activities, and informing risk decisions regarding OEH threats during all phases of military operations. To achieve success, strategic focus is placed on aligning the OEH program to fully support a synchronized SOH program. Army medicine must develop and implement enhanced individual exposure assessment methods. Exposure assessments must be documented and available to all stakeholders to:

- Ensure informed risk management decisions are made at the appropriate levels;
- Protect Army personnel from occupational and environmental hazards;
- Answer questions regarding past environmental exposures; and
- Inform health providers through use of Individual Longitudinal Exposure Records (ILER).

#### Goal 3.4. Objectives:

**Objective 3.4.1.** Align Army OEH program with DoDl 6055.01 requirements.

Performance Measure 3.4.1: U.S. Army Medical Command Campaign Synchronization Working Group (CSWG) products that support DODI 6055.01 requirements. Target: 90 percent by 2025.

**Objective 3.4.2.** Identify Army requirements to ensure successful implementation of the ILER.

Performance Measure 3.4.2: Percentage of Army policy documents that support ILER concept of operations. Target: 100 percent by 2025.

**Objective 3.4.3.** Increase the Army's ability identify and assess significant long-term health risks from past environmental exposures.

Performance Measure 3.4.3: Percentage of OEH risk assessment forms (DD 2977) entered into the Defense Occupational and Environmental Health Readiness System-Industrial Hygiene (DOEHRS-IH). Target: 85 percent by 2025.

**Objective 3.4.4.** Increase DOEHRS-IH usage to document and share OEH information across the Army.

Performance Measure 3.4.4.a: Percentage of high risk workplace hazard characterizations completed. Target: 85 percent by 2025.

Performance Measure 3.4.4.b: Percentage of monitoring plans for high risk workplaces completed. Target: 85 percent by 2025.

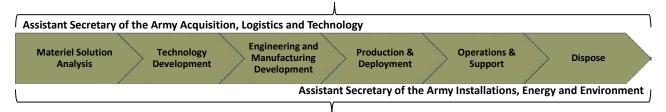
Performance Measure 3.4.4.c: Percentage of required personnel who receive required Occupational Environmental Medicine examinations. Target: 90 percent by 2025.

Performance Measure 3.4.4.d: Percent reduction in incidence of hearing threshold shifts in military and civilian workforce. Target: 3 percent military, 4 percent civilian by 2025.

U.S. Army photo by Rebecca Zinnante

#### **Environmental Quality Technology**

Compliance | Military Materials in the Environment | Pollution Prevention | Sustainable Ranges and Lands



#### **National Defense Center for Energy and Environment**

#### **Goal 3.5. Drive Technology Acquisition**

The Army operates in a dynamic world requiring new capabilities to meet operational requirements. As the Army acquires new technologies, new materiel, and information systems, it is important to ensure environmental considerations are adequately addressed throughout research, development, testing, and evaluation to avoid creating future risks. The Army's Environmental Quality Technology (EQT) program identifies, investigates, and facilitates the use of environmental technology solutions while reducing costs of materiel production, maintenance, and operation.

The Army's EQT program conducts program management and execution for both the Army and the DoD environmental technology programs. It facilitates sustainability with transfer and insertion of new environmental technologies. These sustainable technologies include new chemicals and processes, new equipment, and new materiel coupled with management information platforms that facilitate installation management for training, testing, and industrial operations.

The Army's EQT program continues to provide a virtual toolbox of innovative technologies to resolve high-priority environmental quality technology requirements, while reducing total ownership costs, enhancing mission capabilities, and fulfilling the Army's environmental sustainability and stewardship responsibilities.

The Army will identify ESOH technology shortfalls and integrate requirements into the EQT program—implementing a process to understand and address high priority requirements identified by the installation and acquisition community. This includes integration of early research efforts with EQT demonstration and validation processes to decrease the time it takes to field EQT technologies.

The Army also must increase ESOH considerations early in materiel acquisition programs—broadening the scope of EQT activities within the acquisition community to minimize environmental, safety, and occupational health impacts on the installation when systems and materiel are fielded. The Army will increase leveraging opportunities with its scientists, engineers, and professionals to build a robust network and process that systematically addresses ESOH throughout the lifecycle of a materiel.

A spirit of innovation will be fostered within the Army EQT program—expanding opportunities to work with industry, academia, and across DoD laboratories. The technology office will develop criteria for demonstration and validation funding that rewards researchers with innovative ideas and collaborative teams and focuses on maximizing readiness. Along with innovative ideas is the need to communicate successes, the technology office will increase and foster an environment of sharing outside of DoD to increase leveraging opportunities that benefit the Army and surrounding communities.

The regulatory impact on availability and use of chemicals—global marketplaces, changes in climate, and advances in regulations here and abroad are changing the availability of chemicals and materials. The technology office will predict and plan for long-term response to chemical restrictions, leverage existing tracking systems, and develop research efforts to address material changes.

#### Goal 3.5. Objectives:

**Objective 3.5.1.** Identify ESOH technology shortfalls and integrate requirements into EQT program.

Performance Measure 3.5.1: Develop process to update the Army Environmental Requirements and Technology Assessments (AERTA) document and publish every two years. Target: Current biennial AERTA by 2025.

**Objective 3.5.2.** Increase ESOH considerations early in materiel acquisition programs.

Performance Measure 3.5.2: Percentage of Joint Capabilities Integration and Development System documents reviewed for ESOH inclusions. Target: 90 percent by 2025.

**Objective 3.5.3.** Foster a spirit of innovation within the Army's EQT program and encourage crosspillar and cross-Service collaboration.

Performance Measure 3.5.3.1: Each EQT project will publish at least one article or update in a respected publication each year. Target: 1 article per year per project by 2025.

Performance Measure 3.5.3.2: Percentage of EQT projects funded that are multi-Service/multi-lab. Target: 90 percent by 2025.

**Objective 3.5.4.** Evaluate regulatory impact on availability/use chemicals.

Performance Measure 3.5.4: Develop three chemical use maps per year that identify where the chemical is used, amount used, and potential substitutes or research projects based on developed restricted chemical lists. Target: 3 per year by 2025.

## GOAL 3.6. PROMOTE STRATEGIC ARMY ESOH PRIORITIES

The ODASA(ESOH) represents the Army and strategic Army ESOH interests to counterpart offices in Office of the Secretary of Defense (OSD) and other governmental and regulatory agencies and justifies our strategy, policies, plans, programs, and collaborative interface with external audiences including appropriate officials in the executive branch, Congress, interagency partners, Native American tribal governments, non-governmental organizations, and the public. The ODASA(ESOH) is the Army's interface with congressional members and their staff in addressing critical ESOH issues, reviewing promulgation, and publishing ESOH legislation.

#### Goal 3.6. Objectives:

*Performance Measure 3.6.1:* Number of Warfighter experiments with ESOH equities played. Target: 2 by 2025.

**Objective 3.6.2.** Increase quantity and quality of strategic engagements with ESOH stakeholders.

*Performance Measure 3.6.2:* Number of strategic engagements with ESOH stakeholders and assessment of collaborative outcomes. Target: 2 by 2018.

#### VI. PROGRAM GOVERNANCE

Army ESOH governance for the HQDA is set forth in General Order 2012-01 (Assignment of Functions and Responsibilities within Headquarters, Department of the Army). Army command, Army service component command, and direct reporting unit responsibilities for Army environmental program execution and delivery are provided in AR 200-1 (Environmental Protection and Enhancement); responsibilities for Army Safety Program execution and delivery are provided in AR 385-10 (Army Safety Program); and responsibilities for Army Occupational Health Program delivery and execution are provided in AR 40-5 (Preventive Medicine).

#### VII. WAY FORWARD AND CONCLUSION

The Army Posture Statement indicates that it is imperative for the Army to maintain strategic and operational flexibility to deter and operate in multiple regions simultaneously (in every phase of military operations) to prevent conflicts, shape the security environment, and when necessary, win in support of U.S. policy objectives. The Army ESOH Strategy 2025 provides a baseline for the activities that support the Army's strategic and operational imperative. The Army ESOH community is diverse with many missions and a workforce of talented and committed professionals. As uncertainty remains a central attribute of the security setting, flexibility is a key enabler of the Army's role of preventing, deterring, and responding to conflict. Army planners, leaders, and decision makers have to make hard choices to strike a balance between resources and capacity when future funding and requirements remain uncertain. Innovation, communication, resourcing, and performance assessment enable Army ESOH to achieve its strategic vision and continue to support the Army's national defense mission.

The Army must remain ready and capable of simultaneously accomplishing its national defense mission and sustaining the environment for future generations. By implementing this ESOH strategy and attaining its strategic goals and major objectives at every level, the Army will achieve its Army ESOH vision. This strategy makes certain the Army will continue to be a strong partner and a Federal agency leader in ESOH while ensuring the Army is ready, resilient and capable of defending our Nation. The Army maintains a steadfast commitment to sustain the mission and secure the future.

#### VIII. APPENDICES

Appendix A – References

## Department of Defense Directive (DoDD) 4715.1E

Environment, Safety, and Occupational Health (ESOH)

## Department of Defense Instruction (DoDI) 4710.02

**DoD Interactions with Federally Recognized Tribes** 

#### **DoDI 4715.03**

**Natural Resources Conservation Program** 

#### **DoDI 4715.05**

**Environmental Compliance Outside the US** 

#### **DoDI 4715.06**

**Environmental Compliance in the US** 

#### **DoDI 4715.16**

**Cultural Resource Management** 

#### **DoDI 4715.22**

**Environmental Management Policy for Contingency Locations** 

#### **DoDI 6055.01**

DoD Safety and Occupational Health (SOH) Program

#### **Army Regulation 11-35**

Occupational and Environmental Health Risk Management

#### Army Regulation 40-5

Preventive Medicine

#### **Army Regulation 70-1**

**Army Acquisition Policy** 

#### **Army Regulation 200-1**

**Environmental Protection and Enhancement** 

#### **Army Regulation 385-10**

The Army Safety Program

Military Standard (MIL-STD) 882E System Safety

#### **National Aerospace Standard 411**

Hazardous Materials Management Program

#### **National Aerospace Standard 411-1**

**Tracked Materials** 

U.S. Army photo

#### Appendix B – Definitions

#### **Army Environmental Program**

A multifaceted program intended to ensure an adequate environmental resource base to support mission requirements and support and sustain the Army. This program consists of the Army's Compliance Program to sustain the Army's compliance with applicable Federal and State statutes and regulations, executive orders, and overseas final governing standards. It also encompasses the Army's pollution prevention (P2) program, conservation program, environmental technology program, and restoration programs, which include base realignment and closure and active Army restoration programs. This program is an integral component of the Army's capacity to effectively train and maintain the Forces required to defend the national interests of the United States.

#### **Chemical warfare materiel (CWM)**

Items generally configured as a munition containing a chemical substance that is intended to kill, seriously injure, or incapacitate a person through its physiological effects. CWM includes V- and G-series nerve agents or H-series (mustard) and L-series (lewisite) blister agent, in other-than-munition configurations; and certain industrial chemicals (e.g., hydrogen cyanide (AC), cyanogen chloride (CK), or carbonyl dichloride (called phosgene or CG)) configured as a military munition.

Due to their hazards, prevalence, and military-unique application, chemical agent identification sets (CAIS) are also considered CWM. CWM does not include riot control devices; chemical defoliants and herbicides; industrial chemicals (e.g., AC, CK, or CG) not configured as a munition; smoke and other obscuration-producing items; flame and incendiary producing items; or soil, water, debris or other media contaminated with low concentrations of chemical agents where no chemical agent hazards exist.

#### Conservation

Planned management, use, and protection of natural and cultural resources to provide sustainable use and continued benefit for present and future generations, and prevention of exploitation, destruction, waste, and neglect.

#### **Endangered species**

Any species, plant or animal, which is in danger of extinction throughout all or a significant portion of its range, as listed by the U.S. Department of Interior (DOI).

#### **Environmental stewardship**

Management of resources entrusted to DoD care in a way that preserves and enhances the resources and their benefits for present and future generations.

#### Installation

An aggregation of contiguous or near contiguous, common mission-supporting real property holdings under the jurisdiction of or possession controlled by the Department of the Army or by a State, commonwealth, territory, or the District of Columbia, and at which an Army unit or activity (Active, Army Reserve, or Army National Guard) is assigned. An installation is a single site or a grouping of two or more sites for the purposes of real property inventory control. The real property accountable officer is at the installation level.

For the environmental restoration program, DoD defines an installation as a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the DoD, including any leased facility, that is located within the United States. Does not include formerly used defense sites (FUDS) or any facility used primarily for civil works, rivers and harbors projects, or flood control projects.

For natural resources management purposes (e.g., Integrated Natural Resources Management Plans (INRMPs)), an installation includes any land or interest in land owned by the United States and administered by the Secretary of Defense or the Secretary of a military department, except land under the jurisdiction of the U.S. Army Corps of Engineers, Civil Works, as described in the Sikes Act.

#### **Pollution prevention**

Means "source reduction" as defined in Public Law 107–377 (the Pollution Prevention Act (PPA) of 1990) and other practices that reduce or eliminate the creation of pollutants through (a) increased efficiency in the use of raw materials, energy, water, or other resources; or (b) protection of natural resources by conservation.

#### Resiliency

The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions.

#### **Sustainability**

To create and maintain conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations of Americans.

#### **Unexploded ordnance (UXO)**

Military munitions that:

- Have been primed, fused, armed, or otherwise prepared for action;
- Have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and
- Remain unexploded, either by malfunction, design, or any other cause.

#### Appendix C – Acronyms

AEP	Army Environmental Program			
ASA	Assistant Secretary of the Army			
ATSDR	Agency for Toxic Substances and			
	Disease Registry			
BRAC	Base Realignment and Closure			
C-EH	Counter-Explosive Hazards			
DAC	Department of Army Civilian			
DoD	Department of Defense			
DODD	Department of Defense Directive			
DODI	Department of Defense Instruction			
DOEHRS-IH	Defense Occupational and			
	Environmental Health			
	Readiness System-Industrial Hygiene			
DSMOA	Defense and State Memorandum of			
	Agreement			
ENF	Enforcement Actions			
EPA	Environmental Protection Agency			
EQT	Environmental Quality Technology			
ESMP	MP Explosives Safety Management			
	Program			
ESO	Environmental Support Office			
ESOH	H Environment, Safety and			
	Occupational Health			
ETO	Environmental Technology Office			
IE&E	Installations, Energy and Environment			

ILER	. Individual Longitudinal Exposure	OSHA	Occupational Safety and Health
	Records		Administration
IRM	. Integrated Resource Management	POM	Program Objective Memorandum
MRD	. Munitions Response Dialog	QWE	Quality Work Environment
NDCEE	. National Defense Center for Energy	RDT&E	Research, Development, Test, and
	and Environment		Evaluation
OASA	Office of the Assistant Secretary of the	SEC	Senior Executive Council
	Army	UXO	Unexploded Ordnance
ODASA	Office of the Deputy Assistant	UXOCoE	Unexploded Ordnance Center of
	Secretary of the Army		Excellence
OEH	Occupational and Environmental	3Rs	Recognize, Retreat, Report
	Health		

Appendix D — Federal Environment, Safety, and Occupational Health Statutes And Guidelines

#### 29 Code of Federal Regulations 1904

Recording and Reporting Occupational Injuries and Illnesses

#### 29 Code of Federal Regulations 1910

Occupational Safety and Health Standards

#### 29 Code of Federal Regulations 1926

Safety and Health Regulations for Construction

#### 29 Code of Federal Regulations 1960

Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters

#### **Public Law 13-291**

Sikes Act

#### Public Law 89-665

National Historic Preservation Act

#### Public Law 92-500

Clean Water Act

#### Public Law 93-205

**Endangered Species Act** 

#### Public Law 93-523

Safe Drinking Water Act

#### Public Law 94-580

Resource Conservation and Recovery Act

#### Public Law 94-469

Toxic Substances Control Act

#### **Public Law 101-549**

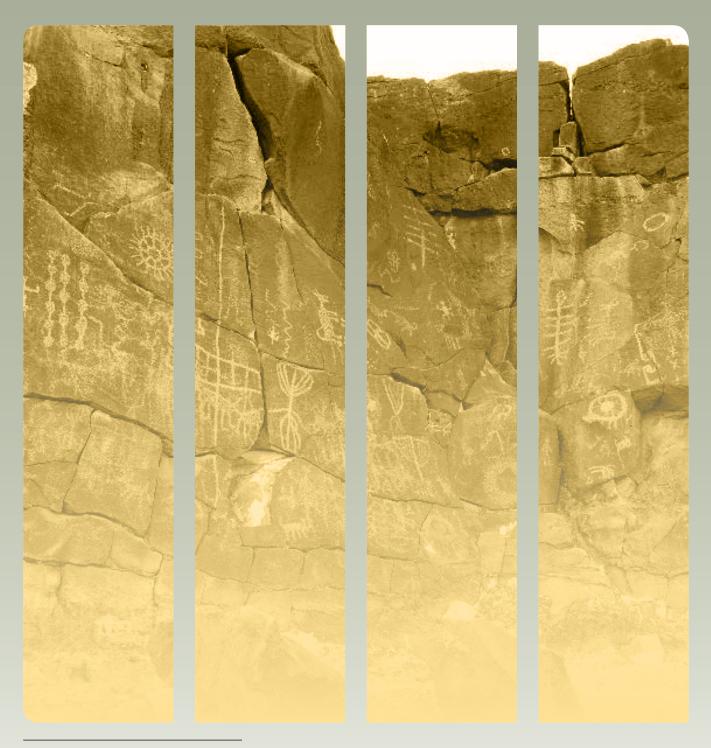
Clean Air Act

#### **Public Law 101-601**

Native American Graves Protection and Repatriation Act

#### **Public Law 107–377**

Pollution Prevention Act of 1990



U.S. Army photo



 $Army\ Reserve\ Soldiers\ from\ the\ 451st\ Expeditionary\ Sustainment\ Command\ fire\ their\ we apons\ on\ the\ kneeling\ position,\ at\ the\ we apons\ qualification\ range\ in\ Kuwait,\ Nov.\ 8,\ 2016.$ 



Office of the Assistant Secretary of the Army for Installations, Energy and Environment