



USAPHC
U.S. ARMY PUBLIC HEALTH COMMAND

Public Affairs Office
5158 Blackhawk Rd. Aberdeen Proving Ground, MD 21010-5403
410-417-2937
usarmy.apg.medcom-phc.mbx.pao@mail.mil

Environmental Health Engineering Portfolio

Mission

The mission of the Environmental Health Engineering Portfolio is to assess, maintain and improve Soldier and Army community environments to advance readiness, health and sustainability. Experts in this portfolio work to protect Soldiers and Army communities, worldwide and including deployments, from environmental conditions that could adversely affect human health—including those associated with air, water, soil, waste, noise and insects. Their efforts also help promote environmental health awareness throughout the Army and the Department of Defense.

Background

The Environmental Health Engineering Portfolio has been present in some form at predecessor organizations of the U.S. Army Public Health Command. Staff elements have existed for nearly 70 years, since the establishment of the U.S. Army Industrial Hygiene Laboratory at the beginning of World War II.

Clients

The Environmental Health Engineering Portfolio's clients are Army and DOD commands, leaders and personnel, garrison staff; military medical treatment facilities, and deployed units.

Structure and Organization

The Environmental Health Engineering Portfolio is one of nine portfolios that make up the Army Institute of Public Health, a subordinate unit of the USAPHC. The portfolio executes its mission through six AIPH technical programs, and also through portfolio-aligned collaboration with environmental health engineering divisions at each of the five USAPHC regions. The portfolio's AIPH technical programs are listed below.

- **Entomological Sciences Program**—This program seeks to prevent exposure to vector-borne diseases, hazardous plants and animals, and pesticides by providing expert diagnostic, investigative and educational services to Army communities. Technical services include management of the DOD human tick surveillance program, vector-borne disease testing to support deployed and garrison units, deployment entomological risk assessments, and archiving of deployed unit pesticide usage data. Program personnel also maintain the DOD Pesticide Hotline.
- **Drinking Water and Sanitation Program**—This program supports military water and food supply communities to ensure high-quality drinking water and safe food service in field and garrison environments. Program staff help ensure the water supplied to military personnel is free of contaminants through water assistance visits, vulnerability assessments and client consultations. The program also develops water conservation plans for Army hospitals. Qualified experts also collaborate with veterinary services personnel on inspections of military dining facilities, commissaries and other venues to ensure that food preparation and sanitation meet or exceed Army standards.
- **Water Resources Program**—This program preserves water quality and protects garrison and field populations from the adverse health impacts of water pollution. Staff experts focus on collection, treatment and disposal of wastewater; management of storm water through best management practices; prevention and control of oil and hazardous material spills and associated contingency planning; surface water maintenance (physical, chemical, and biological quality); and the sustainability, conservation, and reuse of water. The program also minimizes environmental health threats through surveys and studies of subsurface groundwater.
- **Waste Management Program**—This program protects Army units and garrison populations from the health threats posed by hazardous and medical materials and waste, and minimizes the adverse effects of improper waste management through awareness. Staff experts conduct site assessments and compliance reviews, author disposal instructions and provide required waste disposal training. For Army medical treatment facilities, they facilitate the safe and proper transport and disposal of medical waste; for military industrial operations, they facilitate management of solvents and



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other waste streams from military industrial operations in a way that protects health and the environment. They also evaluate solid waste management and pollution prevention practices and conduct environmental condition of property assessments.

- **Air Quality Surveillance Program**—This program evaluates and controls airborne environmental health threats through air quality surveillance of military communities. Staff professionals provide training and assistance to deployed units, and on-site interviews and consultations at Army and DOD installations. Specially trained experts sample and monitor ambient air, and test boiler and industrial operation exhaust emissions to ensure compliance with federal, state and local environmental health laws and regulations. This surveillance and monitoring helps maintain the best possible air quality in Army communities.
- **Operational Noise Program**—“This program provides oversight of Army noise operations ensuring that noise levels do not adversely affect Soldiers, their families, Army civilians and the surrounding community. The program develops installation plans for operational noise, noise and vibration mitigation, and acceptable land use. Additionally, staff experts assess noise impacts for all proposed range construction and troop alignments, with the ultimate goal of ensuring the long-term sustainability of ranges and training.

Environmental Health Engineering’s People

The portfolio fields matrixed, multidisciplinary teams to provide a full spectrum of environmental health and response services. It fields these teams from the nearly 120 military and civilian engineers, scientists and support staff who compose its technical programs. These professionals include environmental engineers and scientists, geologists, biologists, chemists, meteorologists, entomologists and environmental science and engineering officers. In addition to their professional training and experience, many employees hold advanced degrees and professional certifications and serve as DOD and Army subject-matter experts.

The Environmental Health Engineering Portfolio leverages its expertise by collaborating with other USAPHC public health experts and coordinating with other federal organizations and state regulatory agencies.

Portfolio Contributions

The Environmental Health Engineering Portfolio leads matrixed responses to emerging public health threats as well as participating in multidisciplinary teams of scientists, engineers and technicians with full-spectrum, in-house technical support. The portfolio has globalized multi-media intellectual capital with technical reach-back capability. It has positively influenced DOD environmental health programs through onsite and public health oversight activities and cost effective professional services with a wide variety of funding mechanisms.