



2017 Secretary of Defense Environmental Awards Environmental Restoration, Installation Award

Each year since 1962, the Department of Defense (DoD) has honored installations, teams, and individuals for outstanding conservation achievements, innovative environmental practices, and partnerships that improve quality of life and promote efficiencies without compromising mission success. The 2017 Secretary of Defense Environmental Awards cycle encompasses an achievement period from October 1, 2014, through September 30, 2016 (Fiscal Years (FY) 2015-2016). A diverse panel of judges with relevant expertise representing Federal and state agencies, academia, and the private sector evaluated all nominees to select one winner for each of the nine categories that cover six subject areas: natural resources conservation; environmental quality; sustainability; environmental restoration; cultural resources management; and environmental excellence in weapon system acquisition.

About the Environmental Restoration, Installation Award

The Environmental Restoration, Installation award recognizes installations that have made significant efforts to protect human health and the environment by restoring property at active and closed DoD installations in a timely, cost-efficient, and responsive manner under the Defense Environmental Restoration Program. Restoring sites or locations impacted by past defense practices protects military personnel and the public from potential environmental health and safety hazards. The 2017 winner of the Environmental Restoration, Installation award is *Travis Air Force Base, California*.

About Travis Air Force Base, California

Travis Air Force Base (AFB) is a 6,696-acre military installation located in Solano County, California, midway between San Francisco and Sacramento. The base is composed of three primary mobility organizations as well as 50 partner organizations. The 60th Air Mobility Wing is the host wing and it works seamlessly with the 349th Air Mobility Wing, the Air Force's largest associate reserve wing. The third mobility organization is the 621st Contingency Response Wing, America's only contingency response wing ready to deploy within 12 hours to support contingencies or humanitarian operations around the globe. The 60th Air Mobility Wing rapidly projects American power anytime and anywhere in support of national objectives.

The Travis AFB Environmental Restoration Program (ERP) manages one Military Munitions Response Program (MMRP) site and 63 ERP sites. These areas include 21 Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) sites, 16 petroleum only contamination (POCO) sites, three inactive sites at the Potrero Hills Annex, and 23 closed sites.



A field technician describes the procedures for injecting vegetable oil into tight clay soil. This helps Restoration Advisory Board members understand the overall Travis Environmental Restoration Program groundwater cleanup strategy to convey to their constituents.

Major Accomplishments in FY 2015-2016

- Travis AFB achieved Response Complete status for 11 oil/water separator (OWS) sites, which removed two airfield obstructions and set the stage for closing 25 percent of the Travis AFB ERP sites in 2017. The installation also used clean stockpiled soil from technology demonstration projects to restore OWS sites, saving approximately \$20,000.
- The installation built the first ever subgrade sulfate reactor as a POCO technology demonstration that uses sulfate-reduction biological treatment to accelerate the cleanup of fuel-soaked subsurface soil and dissolved petroleum contaminants. Scrap drywall that was destined for a local landfill provided a source of sulfate for the reactor's construction. This regulator-approved project offers the potential to significantly reduce the cost and time to complete future POCO remedial actions.
- Travis AFB applied sustainable remediation principles to speed up groundwater cleanup and reduce the environmental footprint of the base's cleanup efforts. The Travis ERP became the first DoD program, and the first private or Federal program in EPA Region 9, to self-certify conformance with the 2014 American Society for Testing and Materials Standard Guide for Greener Cleanups. EPA Region 9 uses Travis AFB successes in its training materials to explain how facilities within or outside of DoD can use similar approaches to clean up contamination effectively.
- Travis AFB used solar panel arrays to sustainably generate power for extraction pumps and recirculate treated water at three ERP sites and one POCO site. By removing electrical demand from the base power grid, the base reduced annual energy consumption by 675,480 kilowatt-hours at an annual cost savings of \$37,000, and avoided annual generation of 1,773,000 pounds of greenhouse gases.
- The installation worked in partnership with three regulatory agencies to successfully implement 19 groundwater remedies selected in a July 2014 base-wide Record of Decision. The Travis ERP received public accolades from EPA management to confirm its exemplary reputation during the recent Air Force Western Regional Environmental Restoration Summit in San Francisco.



A field technician explains the procedures for injecting a bacterial culture into a plume of solvent-contaminated groundwater without introducing oxygen into the injection point. The Travis Environmental Restoration Program will use the results of this technology demonstration at two sites (one shown in background) to guide future groundwater remediation optimizations.



Travis Air Force Base built the first ever subgrade biogeochemical sulfate reactor that relies on sulfate reduction to biologically treat petroleum contamination in soil and groundwater.