



FY 2015 Secretary of Defense Environmental Awards

U.S. Army Garrison Humphreys

Environmental Quality - Team

Introduction and Background

U.S. Army Garrison (USAG) Humphreys is a strategic Army garrison with combat arms and combat support units that stand “Ready to Fight Tonight” to defend the world’s largest and most heavily protected border, delineating North and South Korea. This creates an amalgam of unique environmental challenges for USAG Humphreys, and that requires compliance with the Korean Environmental Governing Standards (KEGS). The environmental staff must be flexible to train, coordinate, often augment and integrate manpower with the Republic of Korea (ROK) soldiers.

USAG Humphreys’ cantonment consisted of 1,210 acres up until 2008 but now encompasses 3,623 acres. This annex of land is in response to a global repositioning effort in the movement of the U.S. Forces Korea (USFK) HQ, Eighth U.S. Army (EUSA) and the 2nd Infantry Division from USAG Red Cloud and Area I, and USAG Yongsan and Area II. This results in a total net increase from 9,000 supported Soldiers, Civilians, and Family members to over 36,000 by the end of 2018. The transformation of USAG Humphreys is one of the largest US Army transformation efforts of all time. This multi-year, \$10.7 billion program included the transport of over 17 million cubic yards of fill materials for the installation’s massive land development. The transformation effort will add 460 new high-rise facilities (a total of more than 600 buildings) and demolish 260 outdated buildings. Currently, installation partners and organizations move into newly constructed facilities soon after construction is completed.

As environmental leaders, our mission is to support our customers and be conscientious stewards of the Korean lands entrusted to us. As a team, we integrate a customer-oriented attitude into our daily plan, programs and operations to protect the environment as well as human health. We support the Army’s mission by having an aggressive and innovative environmental program that allows for collaboration between U.S. and Korean governments.



JUDGING CRITERIA



Program
Management



Technical
Merit



Orientation
to Mission



Transferability



Stakeholder
Interaction



Impact/
Outcome

Accomplishments

Environmental Management System (EMS)

The USAG Humphreys fully implemented an EMS to monitor effectiveness of its environmental management programs (EMPs) and re-declared conformance to the standards set in ISO 14001, “Environmental Management Systems-Requirements with guidance for use” on 17 June 2015. While maintaining compliance with KEGS, each EMP is specifically designed to monitor a significant aspect. With the support of the Cross Functional Team (CFT), energy and fuel consumption, fuel spills, waste generation, water consumption and the purchase of hazardous material (HM) were selected as significant aspects for USAG Humphreys’ EMPs. The EMPs are reviewed and revised as necessary on a regular basis by the Environmental Quality Control Committee (EQCC), EMS Management Representative (EMSMR) and EMS Coordinator who make sure the objectives are obtainable, and the targets are met. In FY14 and FY15, USAG Humphreys exceeded EMS targets to include:



- Energy and fuel consumption target was set to be reduced by 3% annually. The total energy intensity reduction from the 2003 baseline year was 34.8%, exceeding the Army’s mandate by 4.8%. USAG Humphreys exceeded the energy reduction target by installing solar domestic hot water systems, converting the most expensive cost of fuel, heating fuel, to natural gas; implementing the Army metering program to identify and monitor buildings with high electrical utility use; installing a daylight lighting



system in several vehicles and aircraft maintenance facilities, and replacing installation wide metal halide perimeter lights with more energy efficient lights. USAG Humphreys met the fuel consumption target by acquiring electric plug-in vehicles (PIVs) and promoting their use instead of hydrocarbon fueled vehicles.



- Fuel spills were reduced by 28% in FY15 through formal classroom training of the bilingual Hazardous Material/Hazardous Waste (HM/HW) Handler’s Course, the bilingual Hazardous Waste Accumulation Point (HWAP) Standard Operating Procedure (SOP), hands-on unit located training, and staff assistance visits. This resulted in 6 fewer hazardous substance spill emergencies, saving costs for spill cleanup labor, plus additional special packing and handling costs to dispose of the waste.



- Non-hazardous solid waste generation achieved a 62% diversion rate in FY15, exceeding the target by 12%. This diversion rate was achieved by the best management practice (BMP) of complete sorting, followed by recycling of separated components. The diversion rate of construction and demolition (C&D) waste increased from 59% in FY14 to 65% in FY15. The high diversion rate was due to an expanded reuse program of crushed concrete demolition debris in the construction phase.



- USAG Humphreys exceeded hazardous waste (HW) generation goals in FY15 from the FY14 baseline. USAG Humphreys exceeded the target by reducing HW by 7%. This resulted from an





expanded recycling program, free-issue program, first-in and first-out discipline improvement, and closer oversight of HM management.

- Water consumption target was set to be reduced by 2% annually. USAG Humphreys exceeded the target by installing low-flow shower heads, waterless urinals, sensor controlled sinks and better building management practices.



Waste Reduction

The Environmental Division provides oversight to 45 HM ordering units and ensures reduction in generation of HW by proper HM management. The installation policy, developed by the Environmental Division and approved by the Garrison Commander, outlines that units will be charged disposal fees when gross negligence in ordering, and failure to manage shelf life, causes excess HM to be disposed of as HW. The Environmental Division staff recommend ordering the quantity prescribed in the unit's basic/operational loads for supplies to assist units in avoiding HW disposal fees. This initiative sustains sound HM control practices, reduces the generation of HW on USAG Humphreys, and enhances environmental awareness.



In FY14 and FY15, the garrison recycled 1,925 gallons of antifreeze by testing, de-ionizing filtration, mixing with glycol, and re-issuing the recycled anti-freeze to units. The garrison reduced 17,960 pounds of HW generation of anti-freeze with a total cost savings of \$10,000.

In FY14 and FY15, the garrison recycled 42,790 gallons of petroleum, oil and lubricants (POL). The garrison reduced 290,500 pounds of HW generation with a total cost savings of \$33,500. This was accomplished by selling used POL



to a Defense Logistics Agency (DLA) Disposition Services contract for reprocessing.

To increase solid waste recycling, the Environmental Division developed a contract clause for diversion rate reporting requirements for the solid waste contract that the DPW Contracting Officer's Representative (COR) could incorporate into all new and renewed contracts in FY14. This requires all new and renewed contractors to report the diversion rate of non-hazardous solid wastes and C&D wastes to the COR on a routine basis. As a result, diversion rates of non-hazardous solid wastes and C&D wastes in FY15 achieved 62% and 65% respectively.

Environmental Training and Compliance Inspection Program

The cornerstone of USAG Humphreys environmental program is the environmental training program and compliance inspection program. The



Mr. Matthews from the Environmental Division tours the newly appointed EOs to the HAZMART and HW Storage Area.

Environmental Division offers 40 hours Environmental Officer (EO) training on a monthly basis. The classes are taught in English for U.S. personnel and in Korean for Korean Augmentation



Troops to the U.S. Army (KATUSA) soldiers and KN employees. Other units from various locations in the ROK (U.S. Army and U.S. Air Force) frequently send their personnel to USAG Humphreys for this training. EMS education and awareness are important facets of this training. During the award period, the Environmental Division trained 194 personnel in FY14 and 185 personnel in FY15.



In May 2015, to help prepare for the discontinuation of the HW curbside pick-up operations, a HM/HW Handlers course was developed for units and added to the environmental training program in both English and Korean. A bilingual HWAP SOP was developed to provide units with guidance on how to manage their own HWAP and how to prepare turn-ins for their generated HW. Discontinuing the HW curbside pick-up resulted in a 34% reduction of HW management cost for the garrison. The Environmental Division spearheads the HM/HW Handlers training and fully trained 103 personnel since the course's inception. This HM/HW Handlers training, together with the bilingual HWAP SOP, are contributing factors to reducing the number of fuel spills.

The environmental compliance inspection program is evolving significantly due to continual involvement from Soldiers, government employees and contractors who become certified EOs, allowing them to conduct inspections of their facilities. In August 2015, the Environmental Division developed a new compliance inspection checklist in accordance with applicable regulations, and it was approved by the Garrison Commander. The Environmental Division conducted 145 compliance inspections of all hazardous waste generating facilities on the

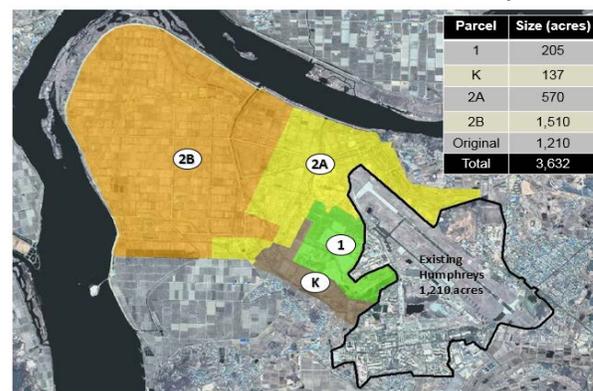
installation during the award consideration period. The number of non-compliance findings throughout the installation has declined by 84% from previous compliance inspections. The Environmental Division seeks to continually enhance environmental stewardship. The results show the number of units which are compliant with the KEGS is increasing.



Environmental Planning and Analysis

Expansion of the garrison is currently underway with end-state totals in both population and acreage tripling in size. The current military and civilian workforce (excluding family members) will rise from 7,300 to an estimated 28,800 personnel. The land area has increased from 1,210 acres to 3,623 acres. Camp Humphreys will be transformed into the Army's major hub in South Korea and a premiere installation. The transformation of USAG Humphreys includes the installation's massive land development, the vertical construction of 460 new facilities, and demolition of approximately 260 buildings.

The Environmental Division not only



Map of the original USAG Humphreys' acreage and transformation area displayed in sections with the appropriate acreage displayed in the table.

attended the planning charrettes for major construction ventures to warrant



sustainable development for all new projects by identifying environmental issues during planning phases but also prepared preconstruction environmental surveys (PES), National Environmental Policy Act (NEPA) equivalent documentation for overseas installations for 52 projects. The Environmental Division supports the expansive transformation by conducting environmental reviews of 266 construction and demolition projects to ensure compliance with regulatory requirements; and to safeguard the historic and natural resources within USAG Humphreys.

The Central Wetland covers approximately 11.8 acres in the central portion of USAG Humphreys and contains multiple wetland communities including aquatic bed, palustrine emergent, and palustrine scrub-shrub plant communities. The wetland provides habitats for various kinds of creatures such as heron, mallard, toad, carp and snakehead. But several



Central Wetland Enhancement Project provided an area where the local habitat and Camp Humphreys can co-exist and provide beauty to the community.

construction projects in the vicinity of the wetland seriously impacted the Central Wetland area. To mitigate impacts from construction projects, the Environmental

Division initiated the Central Wetland enhancement project. The project was designed to increase ecological function, enhance wetland buffer, and increase plant diversity and habitat structure for wildlife. The project aided the wetland by enhancing its functions as well as providing an aesthetic enjoyment area for over 11,000 Soldiers, Families and Civilians. Now at the Central Wetland, USAG Humphreys' community members can interact with nature using eco-friendly access with an observation deck to the wetland and enjoy outdoor recreation with the catch and release fishing program.



Cultural Resources Management

When preparing for construction projects on the newly granted land, 11 grave sites were discovered. The Environmental Division coordinated with the ROK Ministry of National Defense (MND) through USFK to properly relocate the grave sites off-post. Proper procedures established by USFK were



During construction, a coffin was discovered during excavation which had to be relocated off post. It is one of 11 grave sites found on post.

followed to ensure stable station condition for USFK and to mitigate civil complaints.





In coordination with the Cultural Properties Protection Subcommittee (CPPSC), several site surveys were conducted to identify potential buried cultural property areas at USAG Humphreys. Four areas were designated as potential buried cultural Agreed Recommendation (AR) concerning Field Surveys and Joint Procedures for Protecting the ROK Cultural Properties on USFK Facilities and Areas, the Environmental Division is coordinating with CPPSC and USAG property areas. According to the Humphreys Master Planning Division to take the necessary actions including trial trenching surveys prior to construction.



Community Relations (Overseas)



The Environmental Division offers many activities for all stakeholders, educating them on the relevancy of environmental protection, stewardship and management throughout the year. The focus is more intense during the month of April and in particular on Earth Day. “Sustaining the Environment for a Secure Future” was the focal point of all Earth Day activities. As part of the month-long Earth Day celebration, a 5K Family Fun Run promoted physical fitness within the Humphreys Community and enjoying the benefits of



The use of microscopes and fossils aid children in the community develop a better understanding and appreciation of earth science.

clean air. American school students at USAG Humphreys participated in an Earth Day essay contest. American Forces Network (AFN) radio announced an Earth friendly tip of the day countdown to Earth Day during the month of April. The Environmental Division in conjunction with Directorate of Family and Morale, Welfare & Recreation (DFMWR) hosted an Earth Day Fair for over 1,000 community members. All participants received information and BMPs for reuse, recycling and conservation of resources.



At 8:30 pm on 29 March 2014, the USAG Humphreys Boy, Girl, Cub and Daisy Scouts with support from the Environmental Division hosted Earth Hour. During Earth Hour, the Environmental Division encouraged the USAG Humphreys community to turn off their lights for one hour to show their commitment to helping something we all have in common—the planet. During this time, the Scouts signed the Forever Green Pledge using only flashlights and glow sticks for illumination.



Annually, the Environmental Division conducts a tree planting project with the Cub and Daisy Scouts of USAG Humphreys allowing them to each plant a tree for Earth Day.

The Environmental Division is actively engaged in the installation’s annual spring and autumn cleanup campaigns. The Environmental Division’s approach focuses on the importance of being environmentally involved throughout the installation to ensure resources, recyclables and other wastes are properly collected, segregated, recycled and/or disposed of in accordance with applicable policies, regulations and laws.





In July 2015, the Environmental Division sponsored a post beautification project led by Life Scout, Ruben I. Del Rio from



The Environmental Division supports tree planting project for members of Troop 203. The trees are beneficial to Camp Humphreys because in addition to the aesthetics of the planters, they also serve as traffic barriers.

Troop 203. Ruben identified three planters needing renovation to enhance the beauty of USAG Humphreys. The Environmental Division provided plans and guidance to support the task.

Conclusion

Despite the various environmental challenges created by the Army's largest repositioning transformation project, USAG Humphreys Environmental Quality Team has been a leader in enhancing environmental quality while supporting the Army mission. The Environmental Division's continuous efforts to minimize the use of HM, divert non-hazardous solid and C&D wastes, and reduce generation of HW garnered significant savings, both in terms of financial costs and minimizing harmful impacts to the environment. We are committed to taking a proactive role in being conscientious stewards of the Korean lands entrusted to USAG Humphreys. Through the efforts of its Environmental Quality Team, U.S. Army Garrison Humphreys is demonstrating to its host nation that the Army is not only

a valuable asset in sustaining the environment in Korea but also a good neighbor committed to the USFK motto: "We Go Together" or "Gatchi Gapsida."

USAG Humphrey EQ Team Members

Hyuk Pak	Director of Public Works
Dennis Polaski	Former Director of Public Works
Lori Kim	Environmental Division Chief
David Herman	P2 and Conservation Branch Chief
Chinsong Kim	Program manager for solid waste, HM and cultural resources
Chinkwang Yun	Program manager for drinking water, wastewater and project review
Taeon Kim	EMS Coordinator, Program manager for HW, POL, asbestos and budget
Steve Birkner	Technical support, environmental training and compliance inspections
Sheri Castro	Technical support, environmental training and compliance inspections
James Matthews	Technical support, environmental training and compliance inspections
Leticia Redpath	Technical support, environmental training and compliance inspections
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