



2017 Secretary of Defense Environmental Awards Environmental Quality – Industrial Marine Corps Logistics Base Barstow

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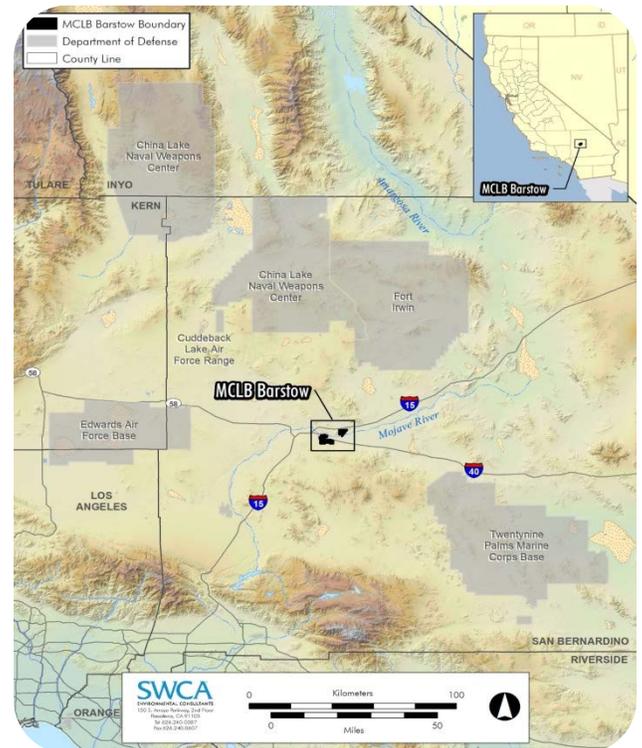
Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Introduction

Marine Corps Logistics Base (MCLB) Barstow is located in the high desert of western San Bernardino County, California, 3.5 miles (6 kilometers) east of the City of Barstow. The base supports approximately 95 military personnel and their families and 1,840 civilian employees. MCLB Barstow is a diverse collection of cantonment and range areas that encompass 5,567 acres (2,253 hectares) within the DoD Southwest Range Complex. The base is positioned at a significant crossroads; two major interstate highways, I-15 and I-40, state highways 58 and 247, and historic Route 66 (National Trails Highway) converge in Barstow, and the Burlington Northern Santa Fe (BNSF) and Union Pacific Railways meet just west of the base.

MCLB Barstow is separated into three functional areas. Nebo Main is a cantonment area which houses the MCLB Barstow headquarters and tenant logistical capabilities. Yermo Annex, situated approximately five miles to the East, is an industrial repair and storage complex which is also home to the largest rail facility in the Department of Defense, and primarily hosts tenant activities supports Marine Corps and U.S. Army rotations to the National Training Center at Ft. Irwin and the Marine Corps Air Ground Combat Center at Twentynine Palms. A range area on the southern edge of Nebo Main includes a live-fire known distance (KD) range complex and open training area.

As one of only three logistics bases operated by the Marine Corps, MCLB Barstow serves an important role as a logistics and maintenance hub supporting Marine Corps activities west of the Mississippi River and in the Pacific theater. The key functions of the base are to receive, store, and distribute supplies and equipment as needed, and to repair and rebuild USMC and other DoD equipment. Activities at MCLB directly support the Marine Corps mission worldwide. MCLB Barstow also provides a platform for the technical and sustainment training of Marines, including maintaining combat skills and on the job training. The MCLB Barstow Environmental Division supports the installation and its tenants through its comprehensive compliance, pollution prevention, conservation, planning, training, and management activities.



Map depicting MCLB Barstow's location within the high desert of Southern California. The Base is unique and complex, and includes 13.24 miles of railroad.



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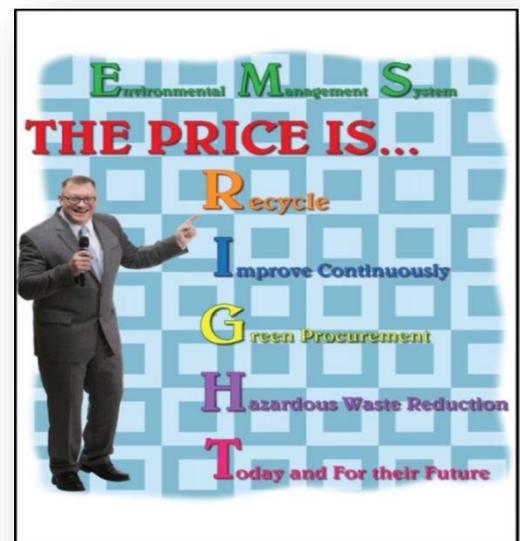
Summary of Accomplishments

Environmental Leadership and Management

During FY16 the base implemented a three-tiered structure to support compliance and conformance on MCLB Barstow. The Commanding Officer provides his environmental and sustainability policy, which serves as the foundation of the installation's environmental programs, and receives periodic reviews of the installation's compliance posture. As the Environmental Management Representative for the base, the Executive Officer leads the Environmental Steering Committee, which is comprised of senior leadership from across the installation and meets quarterly to discuss environmental issues, projects, and associated compliance requirements, and to provide recommendations to the base commander on environmental matters. The third tier is the newly established Environmental Compliance Working Group, which serves both as the EMS cross functional team and the forum for training and receiving feedback from Environmental Compliance Coordinators from the installation and tenant commands. This working group greatly improved the communication among installation departments and staff sections, tenant organizations, and the Environmental Division, and continues to allow the Environmental Division and base organizations to directly support each other in meeting both mission and compliance requirements, reducing waste streams, and in being good stewards of the base's natural and cultural resources.

Environmental Management System (EMS)

MCLB Barstow has implemented an EMS that fully conforms to Marine Corps Directives. The EMS is a one-stop-shop for all aspects of the environmental program, enhancing performance and utilization of resources while minimizing impacts to the mission. In FY2015, the MCLB Barstow Environmental Division and energy program developed and implemented an integrated Environmental/Energy Management System manual. The manual describes the elements of MCLB Barstow's EMS and Energy program and provides direction for the development and application of local environmental directives, including plans, standard operating procedures, and base instructions. Objectives and targets identified in the EMS reduce MCLB Barstow's environmental footprint and improves compliance with environmental obligations.



EMS awareness community outreach poster

As an installation which hosts a wide variety of logistical, industrial and operational tenants from multiple government agencies, the implementation of a fence-line to fence-line Environmental Management System (EMS) has not come without challenges. Defining and communicating roles and responsibilities across organizations, and ensuring all compliance obligations are met



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amid funding constraints, personnel vacancies, and constant turnover make sustaining a robust EMS an all-hands effort with strong leadership support from the command and tenant leadership. With buy-in from every Marine, Sailor, Soldier and Civilian aboard the installation, MCLB Barstow declared conformance in both fiscal years 2015 and 2016, and was determined to be conformant during the triennial headquarters benchmark external compliance evaluation (ECE) in May 2015.

Environmental Compliance Evaluation (ECE)

Improvements to the ECE program contributed to a 50% reduction in findings during the 2015 Headquarters Marine Corps Benchmark inspection from the previous audit in 2011, and the Division continues to implement improvements to the program. In order to promote compliance and conformance at MCLB Barstow, all base environmental personnel completed the integrated EMS/compliance lead auditor course during FY16. MCLB Barstow greatly enhanced the Environmental Compliance Evaluation program and the overall compliance posture of the installation by implementing a rigorous, risk-based inspection schedule that ensures base and tenant compliance with regulations, policy and guidance.

The installation initiated a new approach during FY16 to ensure that findings are properly assessed, communicated, tracked, and corrected. A Corrective Action Report (CAR) is now issued for each finding, and requires stakeholders conduct a root cause analysis and provide a plan of action and milestones for corrective and preventive actions. The Environmental Division's inspection team re-inspects facilities to ensure that the corrective actions are implemented. Environmental compliance coordinators are being trained to conduct weekly spot checks to ensure organizations are continuously working to close any findings annotated during internal ECE and ensure preventive action plans are being followed.

Air Quality

The air quality program is an integral component in achieving mission success. MCLB Barstow maintains more than 100 district permits at Nebo and Yermo, including 77 which apply to Marine Depot Maintenance Command (MDMC) permitted equipment. In addition to the district permits, the base maintains a Title V Federal Operating Permit which applies to all permitted equipment on the Yermo Annex. The base passed the annual inspection by the Mojave Desert Air Quality Management District (MDAQMD) in both 2015 and 2016 with zero findings, and the Deputy Director of the MDAQMD Compliance Group personally congratulated the base on its strong and fully compliant program following the most recent inspection in August of 2016.

Water Quality and Storm Water

The water compliance programs at MCLB Barstow have realized a number of savings and accomplishments during FY15 and FY16, including a significant reduction in potable water use. MCLB Barstow used 171 million gallons of potable water in FY14, and in FY16 reduced usage to 107.5 million gallons, a reduction of 37% over two years. The base also reduced overall water



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compliance costs by 50% between FY15 and FY17, from \$1.2M to \$0.5M, through changes to in-house and contract work and partnerships, freeing funds for other applications to improve compliance and stewardship in support of the installation's mission.

The State of California instituted a new general stormwater permit in June 2016, and new requirements necessitated the establishment of a Qualified Industrial Stormwater Practitioner (QISP) aboard the installation in order to meet permit obligations. The installation Water Program Manager completed the demanding certification program within weeks of the new requirements, and was the 257th person in the State of California to receive the QISP certification out of the more than 8,000 facilities affected by the new permit requirement.

Solid Waste and Quality Recycling Program (QRP)

The installation solid waste diversion rate was 73.69% in FY15 and 80.52% in FY16, well ahead of the Federal mandate of 50%, and leading California's "75 Percent Initiative" goal set by the Governor and Legislature of California, which aims to divert 75% of waste from landfills by 2020. The increase in the diversion rate was due to the QRP team actively seeking and creating projects within the installation to recycle material within the two annexes. The QRP team encouraged community and basewide participation in recycling programs by organizing outreach activities such as Earth Day, and through active communication through the base paper and other media.



Ms. Arely Lessard demonstrates a recycling game during Earth Day celebration



5 tons Scrap metal Roll in bin for recycling

Hazardous Waste Management

MCLB Barstow operates a highly successful HW program in cooperation with tenant organizations. Operations at the MDMC industrial facility and the Yermo Industrial Wastewater Treatment and Recycling Facility generate the preponderance of HW aboard the installation, and improvements to processes between FY15 and FY16 effected significant reductions HW generation and associated disposal costs. During FY15 the installation disposed of 7,303,857



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pounds of hazardous waste and recycled 335,240, while meeting all permit and regulatory requirements. As a result of seeking more sustainable alternatives for products and disposal methods, during FY16 the installation disposed of 2,485,127 pounds of hazardous waste and recycled 274,065 pounds, a reduction in hazardous waste disposal of 68% from FY15. A coordinated effort between MCLB Barstow and MDMC to utilize recyclable blast media for industrial processes, initiated in May 2016, was responsible for approximately 600,000 pounds of that reduction, and realized a savings to MDMC of approximately \$500,000 over 5 months. Anticipated savings in 2017 over 2015 from the use of recyclable blast media are more than 1M pounds of waste and \$1M per year.



Hazardous Waste Reduction Chart

Cultural Resources

Nearly 200 archaeological resources have been identified aboard MCLB Barstow, including more than 81 prehistoric and historic sites. The petroglyph site Rattlesnake Rock is a California site of Historical Interest, and several other sites have been recommended eligible for inclusion



CA-SBR-73 Rattle Snake Rock Petroglyph Site

in the National Register of Historic Places (NRHP). As of 2013, no structures at MCLB Barstow have been determined to be eligible for inclusion the NRHP. In FY16, the installation facilitated a newly integrated Geographical Information Systems (GIS) synchronization



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endeavor, which has led to extremely accurate measures to catalog and manage cultural resources aboard the installation. The GIS synchronization enabled the CRM program to propose new preventive and proactive cultural resource management measures and update SOPs for use aboard the installation. Due to its geographic location, ten Native American Tribes that historically resided in or transited through the region are considered stakeholders with respect to cultural resources at MCLB Barstow, and the base initiates consultation with them on all projects and activities that may impact sites of cultural significance.

Natural Resources

In FY16 the MCLB Barstow initiated consultation with the US Fish and Wildlife Service on a Programmatic Biological Opinion (BO) regarding the federally threatened desert tortoise (*Gopherus agassizi*), which is present on the MCLB Range. The Programmatic BO will promote conservation of the species while sustaining mission capabilities, and training, infrastructure, research and education, and alternative energy activities into the next decade.



Registered Outdoor Memorial

Environmental Planning / National Environmental Policy Act (NEPA)

The NEPA Program instituted a new Request for Environmental Impact Review (REIR) which encourages the provision of appropriate information from the action proponent and allows for faster and more thorough staff review. The Environmental Division also incorporated a recurring GIS synchronization review process into the NEPA workflow. The program also continually coordinates with installation project sponsors in order to facilitate appropriate prioritization of NEPA reviews. The NEPA program continues to reduce turnaround time and backlog through streamlined processes.

Collaborative Partnerships

Government agencies are facing fiscal and human resourcing challenges in meeting federal and state regulatory requirements, and a high turnover rate during FY15 and FY16 has resulted in a young – yet highly motivated – staff within the Environmental Division. Partnerships and strengthened relationships with regulators have been essential to maintaining compliance and will increase the capabilities of the Division to support the mission in the coming years.



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Bureau of Land Management (BLM)

During FY16 the Environmental Division drafted a Memorandum of Agreement (MOA) with BLM in order to leverage cross-functional scientific support, such as archeological and biological survey capabilities, and training opportunities between agencies. The MOA will improve environmental training, conservation and stewardship capabilities in support of both agencies' missions, and will realize cost savings amid budgetary challenges that impact human resources, contract capabilities, and training opportunities.

City of Barstow

MCLB Barstow initiated an agreement to collaborate with the City of Barstow on routine water sampling analysis. This new agreement will realize a cost of savings of \$30,000 per year in laboratory fees. This military-civil partnership is the first of its kind in the Marine Corps. During FY16 MCLB Barstow initiated a partnership with the City of Barstow to jointly conduct water sampling. This community partnership effort, which is the first of its kind in the Marine Corps,

Mojave Desert Resource Conservation District (MDRCD)

In FY16 MCLB Barstow established an MOU with the MDRCD in support of the mitigation/compensation program and wildlife wetland sanctuary aboard the installation. The agreement will allow for tamarisk removal and other restoration activities in the riparian sanctuary along the northern boundary of Nebo Main.

Regulatory Agencies

As part of an ongoing initiative to train Division personnel and ensure continued compliance across all environmental programs, MCLB Barstow organized assist visits and opened lines of communication with by regulatory agencies, including the air district, US Fish and Wildlife Service, and the Regional Water Board. Ongoing free and open conversation with these agencies have significantly improved the capabilities of the staff and allowed the installation to address any compliance questions and improve the base's environmental programs.

Conclusion

Despite the various environmental challenges due to budget constraints and personnel shortages MCLB Barstow continues to be a leader in enhancing environmental quality while supporting the Marine Corps Mission. The Environmental Division's continuous efforts to reduce hazardous material usage, reduce the generation of hazardous waste, and increase diversion of non-hazardous solid waste garnered savings both in terms of financial cost saving and minimizing harmful impacts to the environment. Partnerships initiated and strengthened during FY15 and FY16 have increased the capabilities of the Environmental Division staff to perform their duties, improved the planning and execution of compliance conservation projects, and provided opportunities for external agencies to train and work with the Marine Corps. collaborative efforts will provide cost savings, increase public awareness of the Marine Corps mission and stewardship, and improve environmental performance by the base well into the future.