MARINE CORPS AIR GROUND COMBAT COMMUNITY IMPACT REPORT 2016 CENTER AP) TWENTYNINE PALMS, CALIFORNIA THE PREMIER COMBAT TRAINING INSTALLATION MCAGCC SGT MAJ

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PRODUCED SPRING 2016 BY THE MARINE AIR GROUND TASK FORCE TRAINING COMMAND, MARINE CORPS AIR GROUND COMBAT CENTER GOVERNMENT AND EXTERNAL AFFAIRS, G-5

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Front cover photos (from top): The sign at the Combat Center's main gate welcomes all who come aboard the installation. (Kelly O'Sullivan); Lt. Col. Timothy Pochop enjoys pizza night with his family at Pie for the People in Joshua Tree, Calif. Pochop is director of the Combat Center's Natural Resources and Environmental Affairs Division. He and his wife, Danica, enjoy visiting local businesses with their children, Connor, Madison, Arya and JT. (Kelly O'Sullivan); The Combat Center's Mainside area, seen from the air. (Lance Cpl. Levi Schultz)

Title page photos (from top): A light armored vehicle idles in the Combat Center training area March 22, 2016, during a Marine Corps Combat Readiness Evaluation Exercise. (Lance Cpl. Levi Schultz); Lance Cpl. Jerome Lacaden, rifleman, 2nd Battalion, 7th Marine Regiment, embraces his wife, Ignacia Lacaden, during the battalion's homecoming at Del Valle Field, April 14, 2015. Marines and sailors of 2/7 served as part of Special Purpose Marine Air Ground Task Force-Crisis Response-Central Command 15.1. (Cpl. Medina Ayala-Lo); Cpl. Austin Savage, crash fire rescue specialist, Marine Wing Support Squadron 374, spots Trent Fenstermaker as he operates the hose during a Boy Scout Camp Out at Camp Wilson, March 19, 2016. (Cpl. Medina Ayala-Lo)

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Inside cover photos (clockwise from top left): Pfc. Cristian Acosta, motor transportation operator, 3rd Battalion, 11th Marine Regiment, helps 4-year-old Giovanni Mendez, son of Kimberly Mendez, try on gear during Yucca Valley's Independence Day celebration, July 4, 2015. (Cpl. Medina Ayala-Lo); Hartwell Hills in the Johnson Valley Shared Use Area shimmers at sunset. (Cpl. Medina Ayala-Lo); The Combat Center Color Guard marches onto the tennis court during the 14th annual Banque Nationale de Paris Paribas Open's Salute to Heroes at the Indian Wells Tennis Garden in Indian Wells, Calif., March 11, 2016. (Cpl. Julio McGraw); Capt. Charles H. Richardson, commanding officer, Company B, 3rd Light Armored Reconnaissance Battalion (LAR), plots points on a map in the Combat Center training area March 21, 2016, during a Marine Corps Combat Readiness Evaluation Exercise. 3rd LAR conducted a five-day Marine Corps Combat Readiness Evaluation Exercise to evaluate the combat readiness of B Co. (Lance Cpl. Levi Schultz)

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Back inside cover photos (clockwise from top left): An early photo of the Oasis of Mara in Twentynine Palms, Calif. (Photo courtesy of the Twentynine Palms Historical Society); An aerial view of the Combat Center in the 1950s (Combat Center archives); Aircraft and military vehicles sit on the runway at the expeditionary airfield at Camp Wilson in the 1970s. (Photo courtesy of retired Col. Billy D. Bouldin); In the late 1950s, the Combat Center was officially Marine Corps Base Twentynine Palms (Combat Center archives); Marines participate in a ceremony in the early days of the Combat Center. (Photo courtesy of retired Sgt. Maj. Ray V. Wilburn)



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TRAINING

Real-world, live-fire training that prepares Marines to respond immediately and effectively to any crisis is the cornerstone of the Combat Center's mission.

JOHNSON VALLEY

New training lands in Johnson Valley provide the space necessary for the Marine Corps to carry out realistic training aboard the Combat Center.

ECONOMIC IMPACTS

The Combat Center, military and civilian personnel, and family members make significant economic contributions to the communities surrounding the installation.

POPULATION

At least 30 percent of people living in the Morongo Basin are associated with the Combat Center in some way. They may be active-duty personnel and families, part of the civilian workforce, or retirees.

ENERGY MANAGEMENT

The Combat Center leads the Marine Corps in energy management with programs that save more than \$10 million annually in energy costs.

Waste Management

Recycling programs keep more than 8,000 tons of items out of the Combat Center's landfill annually, including spent brass from training, saving the Marine Corps millions of dollars.

WATER CONSERVATION

The Combat Center has implemented several programs to manage one of its most precious resources while ensuring the Marine Corps can meet its training mission.

NATURAL RESOURCES

Environmental stewardship is a priority at the Combat Center, which is committed to protecting its natural resources.

CULTURAL RESOURCES

Numerous cultural and historic sites aboard the Combat Center, some as old as 2 million years, are being preserved and protected.

Readiness and Environmental Protection <u>Integration</u> (REPI) Program

The Combat Center has formed partnerships with local organizations to protect its training mission and to preserve environmentally significant pieces of land near the installation.

24 Provost Marshal's Office

The Provost Marshal's Office — the Combat Center's police force — conducts law and order operations on the installation.

COMBAT CENTER FIRE

In addition to providing fire protection on the installation, the Combat Center Fire Department is the primary entity responding to mutual aid calls in the surrounding communities.





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EDUCATION

Combat Center leaders are serious about education, and work with local schools and colleges to provide educational opportunities to students at all grade levels.

GIVING BACK

Marines, sailors, civilian employees and family members contribute to the local communities by volunteering their time and talents to numerous organizations.

COMMUNITY OUTREACH

Community Outreach programs both on and off the Combat Center are the foundation of the command's commitment to being a good neighbor to surrounding communities.

OUR COMMITMENT TO YOU

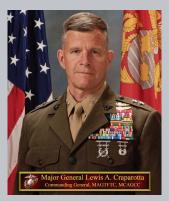
The men and women who live and work aboard the Combat Center consider the Morongo Basin their home away from home and are dedicated to enhancing the quality of life here.





MESSAGE COMMANDING GENERAL

The primary mission of the Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center is to conduct live-fire combinedarms training, urban operations and Joint/Coalition-level integration training that promotes operational forces readiness. This mission fully supports the United States' ability to maintain and enforce national security, but it isn't our only mission. Since the first Marines and sailors arrived in the Morongo Basin in 1952, the Combat Center has been committed to establishing and maintaining mutually beneficial partnerships with our local communities and communities throughout the region.



It is our intent with this report to show how the Combat Center benefits the people and organizations of the Morongo Basin and the region economically, socially, environmentally and culturally.

Combat Center civilian and military personnel have forged strong partnerships with Twentynine Palms, Yucca Valley and San Bernardino County, as well as other communities in the Basin and the Coachella Valley. We also enjoy close working relationships with other federal agencies, including the National Park Service at Joshua Tree National Park and the U.S. Department of the Interior's Bureau of Land Management. We remain committed to growing our relationships with our communities in every way possible.

Each year, the Combat Center distinguishes itself in numerous ways, to include national-level recognition. The installation has won an unprecedented six Commander-in-Chief's Annual Installation Excellence Awards presented by the President of the United States as well as numerous other awards for our conservation and sustainability efforts. Thanks to our energy and water conservation programs, environmental and cultural stewardship programs, innovation in waste management and our commitment to improving efficiency in the way we do business, the Combat Center has set a high standard of performance for other Marine Corps installations to emulate.

With the addition of new training lands in Johnson Valley in 2013, the Combat Center now covers more than 1,100 square miles of rugged Mojave Desert terrain. The unique geography, climate and airspace allow Marines to conduct combined-arms exercises encompassing both land and air elements of warfighting that we cannot duplicate anywhere else in the world.

Based on historical trends and anticipated future Marine Corps commitments around the globe, the Combat Center continually updates the installation's training ranges and programs to keep pace with the Marine Corps' role as America's premier Expeditionary Force in Readiness. Our training complexes, realistic ranges and maneuver areas are critical in preparing Marine units for the complex operations they could face anywhere in the world, well into the future.

Dozens of construction and renovation projects aboard the Combat Center benefit not only the installation as the Basin's largest business enterprise and employer, they also benefit local businesses and contractors as well. The resulting positive economic returns and improvements to local infrastructure in turn benefit everyone who lives here or visits the Basin.

For more than 60 years, the Combat Center has enjoyed being part of this community. Our extensive civic involvement reflects our commitment to preserving and strengthening the bonds that tie us together. We sincerely appreciate everything our neighbors do for our Marines, sailors, civilian employees and their families. Many Marines and their families actively seek to return to the Basin because of this support. We remain committed to working closely with our local communities to achieve continued mutual success in the years ahead.

for a lift

Lewis A. Craparotta, Major General, USMC Commanding General, MAGTFTC, MCAGCC

COMBAT CENTER TODAY

From the moment they arrived in this remote corner of the Mojave Desert in August 1952, the Marines, sailors and civilians of the Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center (Combat Center) have been a solid presence in the communities that surround the installation. From spending their hard-earned money locally to donating time to many organizations in the Morongo Basin and around the region, they make a difference here daily.

At 1,100 square miles, this sprawling installation just north of Twentynine Palms is slightly smaller than the state of Rhode Island, and holds the distinction of being the Marine Corps' premier live-fire, combined-arms training center.

Because of its size and the training conducted here, the Combat Center is critical to the nation's security. Nowhere is the maxim, "We must train as we fight," more possible or more necessary than at Twentynine Palms.

Marines from around the globe conduct training at their home installations to build up their combat skills before putting them to the test at the Combat Center. The installation is home to the

Corps' top training and assessment groups, and units that come here receive the most realistic and up-to-date training possible. The roots of this excellence run deep.

Because of their training at the Combat Center, Marines and sailors have distinguished themselves in battle and during missions around the world, most recently in Operations Iraqi Freedom and Enduring Freedom.

Combat Center organizations include Marine Aviation Weapons and Tactics Squadron 1, Tactical Training Exercise Control Group, Marine Corps Tactics and Operations Group, Marine Corps Logistics Operations Group, Headquarters Battalion and Marine Corps Mountain Warfare Training Center.

Operational units here include 7th Marine Regiment; 1st Battalion, 7th Marines; 2nd Battalion, 7th Marines; 3rd Battalion, 7th Marines; 3rd Battalion, 4th Marines; 3rd Battalion, 11th Marines; 1st Tank Battalion; 4th Tank Battalion; 3rd Light Armored Reconnaissance Battalion; Combat Logistics Battalion 7; 3rd Combat Engineer Battalion; Company D, 3rd Assault Amphibian Battalion; Marine Wing Support Squadron 374; Marine Corps Communication-Electronics School (MCCES); Robert E. Bush Naval Hospital and 23rd Dental Company.

ADAPTING FOR THE FUTURE

When the Marine Corps Logistics Operations Group (MCLOG) was activated at the Combat Center in 2012, it solidified the installation's role as the professional authority over Marine Air Ground Task Force (MAGTF) capabilities development. For decades to come, MCLOG instructors and staff will shape the way the Marine Corps fights with its ground, air and logistics combat elements.

MCCES, which trains Marines in ground electronics maintenance, tactical communications, air control/anti-air warfare operations and maintenance, is the largest Military Occupational Specialty school in the Marine Corps.

All of these things may not mean much to the layperson, but increased air-ground task force capabilities and its world-class training ranges will ensure that the Combat Center — known as the Marine Corps' "crown jewel in the desert" — remains the premier facility for training Marines and sailors well into the 21st century and beyond.

The Combat Center's value to the nation ensures the installation will remain a vital part of the surrounding communities.

As the country's security needs and the challenges facing the Marine Corps change, training conducted aboard the installation also changes. But one thing will remain constant — the Combat Center's commitment to country, Corps and community. By reducing the installation's environmental impact, supporting our neighbors through community service, participating in civic events and daily life as citizens in our local communities, the Combat Center has woven threads of Marine Corps scarlet and gold into the very fabric of our community.

The Combat Center is committed to being a great neighbor, willing at a moment's notice to support its local communities in whatever way it can. The close ties between the installation and its neighbors have been strong since its founding and will continue as long as the installation exists.

COMMITTED TO EXCELLENCE AT ALL LEVELS

One major way the Combat Center has improved support locally is through world-class environmental stewardship. The command continues to implement ground-breaking programs that have significantly reduced impacts in the areas of energy



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and water conservation, range management, and hazardous waste and residential-industrial recycling, as well as natural and cultural resource management and preservation.

Combat Center resource conservation and environmental stewardship programs have earned the installation national recognition. The installation has reduced its energy consumption by 33.93 percent since 2007. Water consumption has been reduced by 69.01 percent since 2007 through water-wise landscaping, innovative vehicle maintenance procedures and modernized water pipes and fixtures.

The Combat Center's leadership in these areas has not gone unnoticed. The installation has won the Commander-in-Chief's Installation

DID YOU KNOW?

Range 220, a Combined Arms Military Operations on Urban Terrain complex at the base of Mount Hidalgo, has no equal within the Department of Defense. The 274-acre mock city the size of downtown San Diego has more than 1,500 buildings in seven separate districts and can accommodate thousands of Marines training as they would operate in urban areas around the globe.

Range 220 has been operational since 2011. (Kelly O'Sullivan)



Excellence Award an unprecedented six times, and in 2013, became the first installation to win it five times in a row. The award — presented annually by the Office of the President — recognizes the excellence of those who operate and maintain military installations in all four branches of the U.S. Armed Forces. To even be considered for such a prestigious award requires an enormous amount of cooperation and teamwork with military personnel and civilians working together both inside and outside the installation's boundaries.

In 2016, the Combat Center won the Secretary of Defense Industrial Installation Sustainability Award for its plan to reduce water usage and minimize waste. In 2015, it won both the Secretary of the Navy Energy and Water Management Award and the Federal Energy Management Program Award, earned two Secretary of the Navy Environmental Awards for Sustainability and the Marine Corps Superior Achievement in Safety Award. In keeping with local community emphasis on preserving the desert's dark skies, night-sky-friendly outdoor lighting systems were adopted, significantly reducing light pollution. All of these efforts reduce the installation's impact on the local environment, improve its fiscal stewardship and support the cultural and environmental goals of the installation's neighbors.

In 2011, the Combat Center became the first installation in the Marine Corps authorized to train its own instructors in the Department of the Navy's Continuous Process Improvement (CPI) program. The Business Performance Office (BPO), has participated in CPI, a program used by major global businesses, since 2007 to improve combat readiness, increase warfighting capability and improve the quality of life for Marines, sailors and their families.

Since 2007, BPO has completed 78 improvement projects, saving the installation and the Marine Corps more than \$24 million. BPO's certified instructors have trained approximately 3,000 Marines, sailors and civilians aboard the Combat Center and other installations, providing a cost avoidance to the command and Marine Corps of more than \$5 million.

With its high performance standards and commitment to excellence, the Combat Center is an example of the Corps' culture of innovation and constant improvement.

Through their innovation and dedication to their mission, the men and women of the Combat Center work hard to ensure that the installation meets its training mission while supporting Marines, sailors and family members through quality-of-life programs and improvements, all while being a good neighbor to those outside the installation's boundaries. It's a tough, complex mission, but it's a mission they take on gladly.



TRAINING

The Combat Center's mission is to provide realistic live-fire, combined-arms training to prepare Marines across a wide spectrum of missions and tasks for their unique role as the nation's crisis response force.

"We must train as we fight" isn't just a slogan; it's a requirement. Marines must remain in a high state of readiness, able to deploy on short notice to any troubled location and stabilize any situation. The dynamic training provided aboard the Combat Center provides units the very foundation for victory no matter where they are called upon to fight.

As America's opponents, battlegrounds, objectives and cultural challenges change, so must training change. From the Cold War-era Desert Palm Tree exercises of the 1950s and the Combined Arms Exercise (CAX) of the '80s and '90s to the counter-insurgency Mojave Viper and Enhanced Mojave Viper (EMV) exercises that focused on Iraq and Afghanistan, the Marine Corps has continually shaped and adjusted training here to meet operational demands.

After the final EMV faded into history in late 2012, the Combat Center's Marine Air Ground Task Force Training Command implemented the Integrated Training Exercise (ITX), returning to the traditional warfighting skills Marines need to successfully fulfill combat missions worldwide.

ITX is a 29-day exercise focusing on the tactical application of combined-arms, live-fire maneuver warfare during global contingency operations. It also includes training events relevant to any Marine Air Ground Task Force (MAGTF) expeditionary operation. Ideally, every battalion and squadron-sized unit will have the opportunity to participate in an ITX at least once every two years.

More than 50,000 active-duty and reserve Marines and sailors, as well as other U.S. and allied forces, train at the Combat Center 350 days each year through ITX, other exercises and formal schools.

The Marine Corps Communication-Electronics School (MCCES) is the largest Military Occupational Specialty (MOS) school

An M1A1 Abrams Main Battle Tank crew fires its 120 mm main gun during a pre-qualification tank gunnery at Range 500. (Cpl. Julio McGraw)



in the Marine Corps, training Marines to operate critical communications networks and assets. In 2015, MCCES activated the Communication Training Battalion to train officers and enlisted Marines under the colors of one battalion.

Marine Corps Tactics and Operations Group (MCTOG) provides advanced training in tactics and operations, and ensures the synchronization of training standards for ground-combat units.

Marine Corps Logistics Operations Group (MCLOG) provides standardized, advanced individual training in MAGTF logistics operations and unit readiness planning at the battalion and regimental levels. It also conducts Battle Staff Training, facilitates logistics education and manages doctrine, training standards, tactics and institutional training programs to enhance combat preparation and performance of Logistics Combat Element units in MAGTF operations.

Tactical Training Exercise Control Group (TTECG) helps develop, coordinate, resource, execute and evaluate training and education concepts, policies, plans and programs to ensure Marines are prepared to meet the challenges of present and future operational environments.



While they aren't located at the Combat Center, there are two units that operate under the MAGTFTC command:

- The Marine Corps Mountain Warfare
 Training Center (MCMWTC) in Bridgeport,
 Calif., conducts unit and individual training
 courses to prepare Marine Corps, joint and
 allied forces for operations in mountainous,
 high-altitude and cold-weather conditions.
 MCMWTC also develops warfighting
 doctrine and specialized equipment for use
 in mountain and cold-weather operations.
- Marine Aviation Weapons and Tactics Squadron 1 (MAWTS-1) in Yuma, Ariz., provides standardized, advanced tactical training and certification of unit instructor qualifications that support Marine aviation training and readiness. It also assists in the development and employment of aviation weapons and tactics.



Marines begin a movement through the snow after completing cold-weather survival classes at MCMWTC (Sgt. Anthony L. Ortiz)

A Marine Corps AH-1W "Super Cobra" assigned to MAWTS-1 maneuvers during an aerial assault training event. (Cpl. Connor Hancock)



The comprehensive training programs and partnerships that extend across the Marine Corps have made the Combat Center the nation's premier live-fire, combined-arms and maneuver training facility, earning the installation the title, "crown jewel of the Marine Corps."





JOHNSON VALLEY

When Marines are called into action, they form a Marine Air-Ground Task Force (MAGTF), bringing together under one commander all of the ground, air and logistics components required to ensure mission success.

The nature of each mission dictates the size of the force assembled. The Marine Expeditionary Brigade (MEB) of about 15,000 Marines and sailors is a medium-sized MAGTF that is task organized to respond to a full range of crises, from forcible entry to humanitarian assistance.

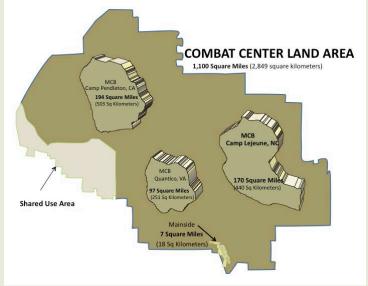
The Marine Corps' philosophy, "centralized planning, decentralized execution," requires that every Marine participating in a mission, regardless of rank, know his or her role and responsibilities, and be prepared to make split-second decisions to carry out those responsibilities in an arena where failure is never an option.

The only way to ensure mission success is consistent, realistic training that prepares Marines for the real-world challenges they may face in an ever-changing landscape of opponents, battlegrounds, objectives, technologies and cultures.

Such training requires a lot of physical space. That's why the Combat Center and Johnson Valley Shared Use Area are so important — only at the Combat Center, with its expanded training lands, can a MEB train the way it would be expected to operate in a deployed environment.

When the Marine Corps stood up 935 square miles of rugged, remote Mojave Desert terrain in 1952 to serve as a muchneeded training center for Camp Pendleton-based artillery units, it was an ideal venue for artillerymen. Here, they could fire in four directions at once, and occupy and maneuver through an area at the same time, something they couldn't accomplish at their 194-square-mile home base on the coast.

Despite the seemingly endless amount of space here, however, Marine Corps mission requirements, increased mobility and



speed, increased range of weapons systems, and other factors such as munitions storage, protected species habitat, and the identification of sites of cultural and historical importance aboard the installation all limit the amount of land that can be used for training.

To meet its mandate to conduct realistic MEB training, the Combat Center requires land and airspace to allow three battalions and all of their support personnel, equipment and vehicles — roughly 15,000 Marines and sailors — to simultaneously maneuver for 48 to 72 hours in a combinedarms, live-fire exercise scenario.



In 2013, Congress authorized the addition of the Johnson Valley Exclusive Military Use and Shared Use areas to the Combat Center's training lands. That additional 225 square miles will allow the command to continue providing realistic, world-class training to Marines, sailors and coalition partners, thereby ensuring that the Marine Corps effectively meets its training requirements for the nation.

The first major training exercise to utilize the installation's new lands is scheduled for August 2016.

WHAT IS A MAGTE?

Every Marine Air Ground Task Force (MAGTF) is a balanced air-ground, combined-arms organization of Marine Corps forces led by a single commander and structured to accomplish a specific mission. Regardless of mission, each MAGTF has the same basic structure:

Command Element (CE): The CE is comprised of headquarters and other units that provide intelligence, communication and administrative support for the MAGTF.

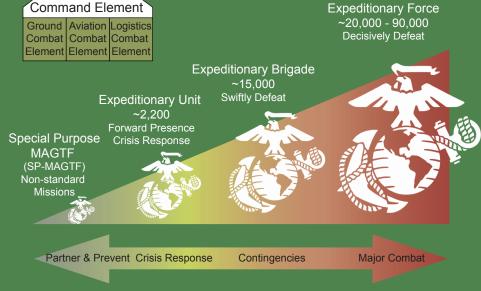
Ground Combat Element (GCE): The GCE conducts ground operations in support of the MAGTF mission. It includes infantry, artillery, reconnaissance, armor, light armor, assault amphibian, engineer and other forces as needed.

Aviation Combat Element (ACE): The ACE conducts offensive and defensive air operations. It may include fixed-wing tactical aircraft, tiltrotor aircraft and rotary-wing assault support aircraft.

Logistics Combat Element (LCE): The LCE provides the equipment and personnel (supply, maintenance, transportation, engineering, health, administrative, communications and more) that keep the MAGTF running.

Other attachments rounding out a MAGTF may include civil affairs teams, interpreters, military working dogs, explosive ordnance disposal teams and others, depending on the mission.

Marine Air-Ground Task Force



Scalable and tailorable combined-arms teams



ECONOMIC IMPACTS

he Combat Center is the Morongo Basin's main economic driver, contributing an estimated \$1 billion annually to the local economy, both directly and indirectly.

The Combat Center supports 16,000 jobs on the installation or in the communities surrounding the installation, equal to 52 percent of all employment locally. Combat Center direct and indirect spending comprise 48 percent of the Basin's economic activity.

DIRECT ECONOMIC IMPACTS

Combat Center spending directly affects the local economy. As the Basin's largest employer, the installation spends millions annually on payroll, service and construction contracts, and utilities. Other direct impacts include retiree pensions and health care spending.

The Combat Center's payroll and contract spending are important to the installation's long-term mission and to the surrounding communities' economic stability. The Basin depends on economic activity generated by the Combat Center, and the installation depends on support from the community. This relationship ensures that the Combat Center can meet its mission to enhance Marine Corps operational readiness by conducting live-fire, combined-arms training.

In 2015, there were 11,000 active-duty Marines and sailors stationed at the Combat Center. Civilian employees totaled 1,900, with an estimated 400 full-time and part-time contract employees working at the installation as well. Annual salary and wages for all these individuals totaled about \$500 million.

Military installations award contracts through highly regulated federal processes that result in millions of dollars in privatesector contracts each fiscal year. Combat Center contracting significantly contributes to both the local and regional

ANNUAL PENSIONS BY COMMUNITY FOR MILITARY AND DOD CIVILIAN RETIREES IN THE MORONGO BASIN (2015)

	YEARLY TOTAL		
COMMUNITY	COUNT	GROSS PAY	
Twentynine Palms	1,027	\$26,000,000	
Yucca Valley	444	\$11,000,000	
Joshua Tree	162	\$4,100,000	
Morongo Valley	20	\$360,000	
Landers	21	\$570,000	
Pioneertown	8	\$280,000	
Total	1,682	\$42,310,000	

Source: DMDC September 2015

economies, with contracting dollars spent both in the Basin and throughout the broader regional community.

The installation's two largest contract spending categories are services and utilities, and construction and maintenance. In 2015, Combat Center services and utilities contract spending



totaled \$79 million, including \$12 million spent in the Basin. Construction and maintenance contract spending totaled \$54 million in 2015.

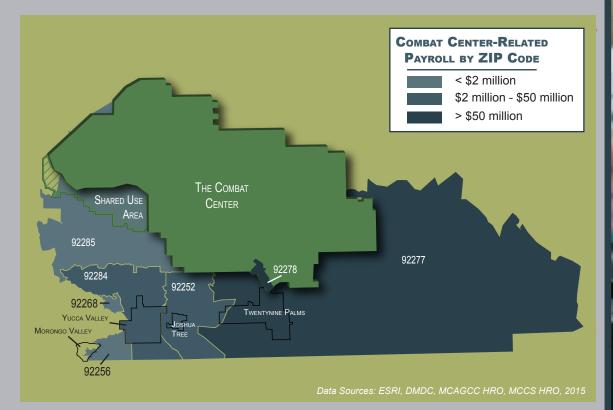
Recent construction projects completed on the installation include new bachelor enlisted quarters, tank vehicle maintenance facilities, communications and dining facilities, a new Lifelong Learning Education Center, Project Leatherneck electrical infrastructure and a second cogeneration plant (see pages 14-15 for more information on energy management).

Ongoing construction projects include a new Child Development Center, adult medical care clinic, infrastructure upgrades at Camp Wilson and multi-function fitness areas. The Combat Center also upgraded the electrical infrastructure that provides commercial electricity to the installation. Those upgrades resulted in a redundant system to continuously provide power to the Combat Center.

Although the installation satisfies most of its energy needs through its cogeneration plants and solar arrays, it pays \$15 million annually to electric, natural gas and telephone service providers. In 2015, it also paid a total of \$690,000 in off-base military housing property taxes to San Bernardino County and Twentynine Palms.

Military and Department of Defense (DoD) civilian retiree pensions are similar to payroll in terms of economic impact. Military-related retirees across the Basin receive \$42 million in pensions annually, with more than half — \$26 million — paid to the 1,027 retirees who live in Twentynine Palms. For a breakdown of military-related pensions by community, see the related table on page 14. Many retirees who stay in the area after leaving active duty or their jobs at the Combat Center have pursued new careers locally, contributing skills and experience that benefit the quality of life in the Basin.

The last category of direct spending — health care — includes medical and dental benefits to service members, military retirees and family members in the Morongo Basin. In 2015, medical and dental payments to local health providers were as much as \$50 million.



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ECONOMIC IMPACTS (CONTINUED)

SNOWBALL EFFECTS OF INSTALLATION SPENDING

The local financial impact of Combat Center spending is more than simply the initial amounts paid for payroll, services and contracting. Combat Center wages, pension payments and contract spending indirectly support 2,500 part- and full-time jobs in the Morongo Basin. Total payroll for these jobs is roughly \$97 million.

When Combat Center personnel receive their paychecks, they generally do not leave the entire balance in their bank accounts. Instead, much of the money is cycled through the local economy as they pay such living expenses as housing and utilities, and purchase items like food, clothing and gasoline. If their vehicle breaks down, they go to a local mechanic to perform repairs. The mechanic's family then uses the money to pay living expenses and purchase goods and services from local businesses, which in turn pay their employees, and so on.

Construction and maintenance contracts are another example of how indirect spending benefits the local economy. Some contracts are awarded to local companies and others are awarded to those outside the Basin and even out of state. Companies located outside the Basin must decide whether to transport equipment, materials and employees to the Basin and house them here for the contract period, or to source them from other companies in the region. Either way, the contracted company must spend a large portion of its contract money locally to complete construction.



Cpl. Julio McGraw purchases movie tickets at Cinema 6 in Yucca Valley. (Lauren Kurkimilis)

During their stays in the Basin, subcontractors also contribute to local revenues as they spend wages and daily meal allowances in local restaurants and grocery stores, and on automotive repair, gasoline (and associated taxes), entertainment and more.

Family members and friends visiting Marines and sailors stationed here also spend money locally, as do temporarily stationed personnel and installation employees on short business trips.



Lt. Col. Timothy Pochop enjoys pizza night with his family at Pie for the People in Joshua Tree, Calif. Pochop is director of the Combat Center's Natural Resources and Environmental Affairs Division. He and his wife, Danica, enjoy visiting local businesses with their children, Connor, Madison, Arya and JT. (Kelly O'Sullivan)

These expenditures are just a few examples illustrating the many ways Combat Center spending directly and indirectly supports the area's economy.

PROTECTING THE MISSION PROTECTS THE ECONOMY

It is important that the Combat Center works with local, state and federal officials as well as with residents of the surrounding communities to protect the Marine Corps' training mission and the economic health of the Basin.

This can be achieved by the installation and communities working together to avoid landuse decisions that could adversely impact training, such as siting a wind turbine energy project under a designated military aircraft training route. Avoiding projects incompatible with training helps preserve the Combat Center and its role as an economic engine, just as the surrounding communities would avoid siting such facilities in areas that would degrade the spectacular view sheds that make tourism the Basin's second-largest economic driver. In this sense, preserving view sheds and air routes is a double economic benefit to the local communities.

The Combat Center is proud of the benefits its payroll, contracting and health services provide in neighboring communities. The installation continues to be resilient and part of that resiliency depends on protecting, for the long term, the Marine Corps' ability to conduct the live-fire, combined-arms training

POPULATION-BASED TAXES PROVIDE ANOTHER BENEFIT TO THE COMBAT CENTER'S CLOSEST NEIGHBOR

Many municipalities benefit financially by annexing the residential areas of neighboring military installations into their city boundaries.

Since annexing the Combat Center's Mainside area in 2000, Twentynine Palms has received higher apportionments of county and state taxes that are allocated based on population. In 2015, Twentynine Palms received \$795,808 in gas tax revenues and \$200,000 in Measure I retail transaction and use tax revenues for the base population.

that is the Combat Center's hallmark. Doing so not only ensures that Marines are prepared for their missions; it also ensures that the Combat Center remains a strong economic driver for the Basin.

COMBAT CENTER'S CONTRIBUTION TO COMMUNITY INFRASTRUCTURE

Infrastructure allows cities to physically function. It includes water pipes, roads, gas lines, telephone poles, streetlights, cable lines and electric lines. The placement of infrastructure is important for people to conveniently use and access public services. Utilities are a good example of a type of infrastructure.

The public services infrastructure of the surrounding communities benefits from the Combat Center's presence. When permanent and visiting populations at the Combat Center spend money locally, San Bernardino County and local municipalities receive increased tax revenues that they can allocate to infrastructure improvements.

As the Combat Center grows, its infrastructure needs will increase. Project Leatherneck (see page 14 for more details) is an excellent example of how the installation's energy needs facilitated a major upgrade in Southern California Edison's infrastructure, giving the local area a power system that allows for a backup circuit and lessening the chances for blackouts in the area that were all too frequent in the past.





POPULATION

The Combat Center is at the far eastern end of the Morongo Basin, a geographical region that includes Morongo Valley, Yucca Valley, Pioneertown and Homestead Valley in its west end; Joshua Tree in the center; and Twentynine Palms and Wonder Valley in the east end.

Population estimates from 2014 provide a useful snapshot of the character of the local population and illustrate how the Combat Center fits into the local community. Between 2010 and 2014, the Basin experienced population growth on par with that of the state and nation. During that time period, Twentynine Palms experienced the highest increase in residents at 2.2 percent, while Morongo Valley experienced the lowest increase at 1.5 percent (see table at right).

Twentynine Palms' population estimates include those living aboard the Combat Center. The Combat Center's Mainside area was annexed into the city in 2000.

INTEGRAL PART OF THE COMMUNITY

Combat Center Marines, sailors, civilian employees, retirees and family members are an integral part of life in the Basin. They shop at local stores, attend local schools and participate in local sports and cultural activities. Many donate time and money to local causes. Overall, the people who frequent the Combat Center are ordinary citizens. Of the 70,709 people living in the Morongo Basin in 2014, at least 30 percent were associated with the Combat Center in some way.

INSTALLATION WORKFORCE

CHANGE IN RESIDENT POPULATIONS BETWEEN 2010 AND 2014				
	POPULATION			
	2010	2014	Percent Change	
United States	308,745,538	314,107,084	1.7%	
California	37,253,956	38,066,920	2.2%	
San Bernardino County	2,035,210	2,078,586	2.1%	
Twentynine Palms	25,048	25,601	2.2%	
Yucca Valley	20,700	21,083	1.9%	
Joshua Tree	7,414	7,564	2.0%	
Morongo Valley	3,552	3,605	1.5%	

Sources: U.S. Census Bureau, 2010 Census and 2010-2014 American Community Survey 5-Year Estimates

Flags of America's Armed

Palms Public Cemetery.

(Kelly O'Sullivan)

Forces fly over the veterans'

monument at the Twentynine

Active-duty personnel are only one component of the Combat Center's total workforce. The key to providing long-term continuity in managing the

installation is the civilian workforce. In 2015, there were 11,000 activeduty



Marines and sailors stationed at the Combat Center with 7,800 of their family members, and 1,900 civilian employees providing support. Ninety-two percent of the Combat Center's active-duty Marines, sailors and civilian employees live in the Basin.

MILITARY AND DOD CIVILIAN RETIREES

A total of 1,682 military and civilian retirees from all branches live in the Basin. Many retirees continue to serve their community via town, city and community councils, as well as on school, hospital and chamber of commerce boards. They also serve on county and state commissions, in the California Legislature, and as of 2013 in the U.S. House of Representatives. Many retirees make a difference by volunteering their time and sharing their expertise with the dozens of service and cultural organizations that work to improve the quality of life in the Basin.

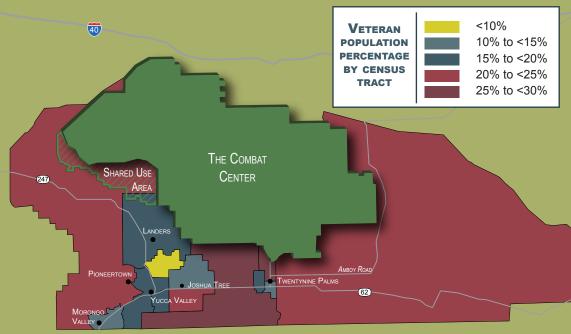


Jerry Fabricius, a retired Marine major, salutes the colors at the annual Memorial Day observance at the Twentynine Palms Public Cemetery. (Kelly O'Sullivan)

VETERAN POPULATION

Veterans comprised 17.8 percent of the Morongo Basin's population in 2014. The map below shows the percentage of local civilians who are veterans.

Most of the Basin has a veteran population that is considerably higher than the county (6.9 percent), the state (6.4 percent) and the nation (8.7 percent). Many retired service members stay in the area or move here because of the proximity of the Combat Center and the services available to military retirees.



Data Sources: Esri, U.S. Census Bureau, 2010 Census and 2010-2014 American Community Survey 5-Year Estimates

13

ENERGY MANAGEMENT

The Combat Center leads the Marine Corps in energy management, utilities conservation, powergenerating capacity, microgrid control and utilities cost-savings. The installation's award-winning programs and infrastructure initiatives save the Marine Corps \$10 million annually in energy costs, and have reduced the impact on the Southern California power and energy systems over the last 15 years.

The Combat Center generates 90 percent of its own energy annually and 95 percent of its own energy during the winter months. Power generation aboard the installation can be sustained for several days in an emergency situation, which will enable the Combat Center to continue its mission and support the local community as directed by the command authority.

Advanced Technology Improves Efficiency

Partly due to the Combat Center's success in the areas of alternative energy and infrastructure development, the

installation qualified to take part in a joint project between the Department of Defense and the Department of Energy. The Combat Center received advanced systems that allow for flexibility in managing electrical distribution in its local power grid. These systems, collectively referred



Crew members at the Combat Center's new cogeneration plant monitor the system. (Kelly O'Sullivan)

to as a microgrid, are cutting-edge technologies that ensure the command can continue its training mission during power outages and other challenging situations.

Recent upgrades to the Combat Center's microgrid include large-capacity battery systems for better energy storage and highly accurate "smart" meters that rapidly capture system information.

COGENERATION PLANTS POWER THE INSTALLATION

One of the key elements of the Combat Center's energy management program is the use of cogeneration plants. These complex systems produce electricity with turbines that burn natural gas, then use the remaining heat to produce hot water for other installation needs. This approach eliminates the need to operate a separate system to produce heat, and saves significant operating costs. Cogeneration plants produce cheaper energy with less environmental impact. While commercial utilities typically produce electricity with 33 percent efficiency, the Combat Center's cogeneration plants operate at 80 percent efficiency.

Together, the Combat Center's two cogeneration plants generate enough electricity to cover more than 90 percent of the installation's usage year-round. The first plant, which came online in 2003, produces 7.2 megawatts of power annually. The second, which came online in July 2014, produces 9.2-megawatts of power annually and is the largest in the Marine Corps.

SOLAR TAKES ADVANTAGE OF YEAR-ROUND SUN

Photovoltaic solar arrays are an important part of the Combat Center's energy program, generating more than 5 percent of the electricity that is used by the installation annually. The Combat Center's solar panels can produce more than 8 megawatts of green energy annually, including a 1.2-megawatt solar array and more than 50 smaller systems that are predominately installed on rooftops throughout the installation.

The Morongo Basin averages 350 days of sunshine a year, meaning the installation's solar arrays can help keep Combat Center systems and buildings powered even in the event of an outage in the public grid. The Combat Center had between 8 and 9 megawatts of annual solar-power-generating capability as of 2015, and it will continue to grow into the future.

PROJECT LEATHERNECK MEETS INCREASED NEEDS

As the Combat Center has grown, so have its electrical needs. Even with its cogeneration and renewable energy sources, the feed from Southern California Edison (SCE) — the electrical utility that serves the region — was no longer adequate to sustain training operations. The Combat Center partnered with SCE to increase its feed from 34.5 kilovolts to twin-transmission 115-kilovolt lines.

In 2012, a new Leatherneck substation was built aboard the Combat Center to handle the installation's power requirements. Its internal power grid also was upgraded, and new switches and controls were installed.

The Combat Center's power upgrade also facilitated changes to SCE power lines feeding the installation as well as its electrical systems serving the entire Morongo Basin. The twin 115-kilovolt lines are fully switchable so that if one line is down, the system automatically switches to the other, thus providing power to not only the Combat Center but the surrounding area as well.

Because of the Combat Center's upgrades, the overall reliability of SCE's system serving the Basin greatly increased. Its main control center is able to manage the grid system better and faster, and it can maintain power easier than in the past.

ENERGY PROGRAMS WIN AWARDS

The installation's energy programs have not gone unnoticed. The Combat Center has won multiple Federal Energy Management Program awards for cogeneration, renewable energy and advance controls from the U.S. Department of Energy. It also won the Marine Corps Large Shore Energy Award three times between 2008 and 2011, as well as multiple platinum-level awards over the last 10 years.

THE COMBAT CENTER REDUCES NIGHT-SKY IMPRINT

Not content to merely increase energy efficiency through infrastructure and other improvements, Combat Center energy managers began a project in 2008 to conserve energy and reduce the installation's night-sky imprint.

Under Operation Dim the Lights, they have replaced more than 4,000 light fixtures throughout Mainside and at Camp Wilson with night-sky-compliant fixtures that direct beams downward instead of out. Old, champagne-colored streetlights and other lights on building exteriors are being replaced with white lights that use half the energy. Newer LED technology also is being incorporated.

Motion sensors were placed in offices as well as on many outdoor lighting fixtures so lights come on only when necessary. The Combat Center's running track is an excellent example — each solarpowered light comes on only when a runner or walker trips its sensor. Each stays on for five minutes, allowing the runner sufficient light to continue along the track. Similar lights also were placed on walking trails at the Felix Field sports complex.

ENERGY MANAGERS LOOK TOWARD THE FUTURE

The Combat Center's energy managers are always looking for ways to make the installation more energy efficient. Future projects include insulating the Combat Center's concrete buildings to pare down energy usage in those structures, and solar heating for the training tank and Officers' Club pool. The installation's microgrid also will be upgraded, making the Combat Center the first installation able to operate under its own power in the event of an emergency.



IMPROVING AIR QUALITY

The Combat Center produces approximately 89,000 tons of greenhouse gas emissions annually from stationary and mobile sources, fugitive and process emissions and purchased electricity. This represents a 6.4 percent decrease from 2008 emissions.

These reductions are the result of energyefficiency projects including the installation and optimization of on-site cogeneration facilities providing electricity, chilled water cooling system and hot water heating system to the installation.



Rooftop solar panels are a familiar sight throughout the Combat Center. (Lance Cpl. Levi Schultz)

Additionally, the increased use of on-site renewable energy generation from photovoltaics has further decreased the installation's greenhouse gas footprint, as well as its reliance on fossil fuels and purchased electricity.



WASTE MANAGEMENT

As any city or town government knows, handling the different types of waste generated by a daily population of 21,700 is a substantial logistic responsibility. Add to that the specialized types of waste generated aboard the Combat Center — like brass ammunition casings and hazardous and industrial waste produced by one of the largest live-fire training installations in the world — and you have some real challenges.

WASTE MANAGEMENT MODEL

The Combat Center has a strong history of proactive environmental policies, making the Environmental Directorate the logical home of waste management aboard the installation.

As they continue to tackle challenges presented by the different waste streams generated aboard the installation, department managers follow the spirit of Executive Orders and Department of Defense (DoD) efforts to foster more efficient and businesslike approaches to military problem-solving.

One solution was the creation of a separate entrepreneurial activity within the Environmental Directorate. The Qualified Recycling Program (QRP) has become a model for the DoD, fostering innovative practices that have been implemented at other military installations around the country. QRP reissues or recycles more than 172 types of items, keeping more than 8,000 tons of materials out of the installation's landfill annually.

The \$1.6 million in revenue generated yearly offsets program costs and goes toward quality-of-life improvements aboard the installation.

Since 2006, QRP has disbursed more than \$1.16 million to Marine Corps Community Services (MCCS) for quality-of-life programs for Marines and sailors who serve here, as well as their families. Projects funded include the installation's children's splash park, Heritage Park, buses for the Single Marine Program and sponsoring of the MCCS Fall Festival.

The following are two notable accomplishments since QRP's creation in 2006:

- Decreasing landfill disposal of solid waste by 38 percent annually.
- Increasing the volume of recycled goods by 48 percent.

HAZARDOUS WASTE

The Hazardous Waste Management Branch ensures compliance with federal regulations such as the Resource Conservation and Recovery Act. The branch processes items including used oil, aerosol cans, antifreeze, electronic waste, used lead acid batteries and petroleum-contaminated soils.

DID YOU KNOW?

Waste items collected aboard the installation since 2006 include:

- Aluminum/steel cans: 79,200 pounds
- Glass: 143,240 pounds
- Range residue: 30.2 million pounds
- Hazardous waste: 4,152 tons
 - » Resource Conservation and Recovery Act (RCRA) hazardous waste includes Waste diesel/jet fuel, enamel Alkyd paint, used/spent solvents, X-ray developer and toner, lead-containing waste, Freon (ozone-depleting substance/ODS)
 - » Non-RCRA hazardous waste includes used oil, water contaminated with petroleum oil and lubricants, soil contaminated with California Title 22 heavy metals (lead, cadmium, chromium, benzene), fluorescent light tubes, water-based paints, asbestos-containing material, and lithium, nickel, alkaline, lead acid and zinc air batteries
- Materials recycled: 1,802 tons
- » Includes used antifreeze, assorted petroleum oil and lubricant (POL) filters, used aerosol cans, assorted plastic and metal POL containers, lead acid technology batteries, assorted cathode ray tubes from TVs and monitors, and POL-contaminated debris

Since 2010, QRP has recycled:

- Range residue and gleanings (materials deemed as safe): 24.8 million pounds
- · Assorted metals recycled: 12.6 million pounds
- Other recycled materials: 9.3 million pounds



Plastic bottles collected from sites around the installation await purchase by American recycling companies at the Qualified Recycling Program's household/ industrial recycling lot. (Kelly O'Sullivan)

From fiscal year 2002 to 2015, the branch:

- Reduced hazardous management costs from an average of \$543,000 to \$152,000 annually.
- Reduced its hazardous waste generation by 43 percent

 from 377 tons to 214 tons annually by treating and
 recycling hazardous materials and keeping them out of
 waste streams requiring off-site disposal.

RECYCLING OF RANGE-GENERATED SOLID WASTE

The Combat Center generates range residue and industrial waste during training. Material such as wooden pallets, practice projectiles, spent munitions casings, target remnants, tires and other items present unique challenges due to the large volume and wide assortment of materials handled by the Range Sustainment Branch.

In response, QRP staff has developed methods for converting much of this range residue to commercial scrap for sale or reuse. These innovative practices serve as a benchmark for the Marine Corps in working toward viable range management and sustainability.

RESIDENTIAL-INDUSTRIAL RECYCLING

Recycling Branch operations consist of solid waste/recycling collection and material processing. Since 2006, the Recycling Branch has collected an annual average of 8,700 tons of trash and more than 6,000 tons of recyclables from 1,905 military family housing units as well as 502 bachelor billeting, industrial and office complexes.

During this period, the branch also collected approximately 3,100 tons of recyclables from Camp Wilson, the installation's expeditionary training facility.

For its efforts, the QRP has been recognized by the Environmental Protection Agency with a Certificate for Outstanding Environmental Achievement.

In 2015, the QRP's contributions and proactive solid waste management efforts helped the installation win the Secretary of the Navy and the Secretary of Defense Award for Sustainability, Non-Industrial Installation.

Right, top to bottom: Tim Christian, work leader, Hazardous Waste Management Section, places a can of spray paint into a machine that safely removes remaining liquid and stores it for disposal. Once processed, the can is ready to be recycled. (Kelly O'Sullivan)

A Marine prepares to offload items collected after training on one of the Combat Center's many training ranges. Items are demilitarized by workers at the Range Sustainment Branch, then sold to American recycling companies. (Kelly O'Sullivan)

Brass casings turned in to the Range Sustainment Branch by Marine units after training await processing into pellets. (Kelly O'Sullivan)





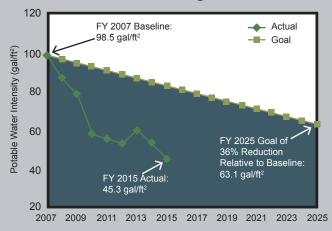
WATER CONSERVATION

Water is the desert's most precious commodity, and the Combat Center is committed to carrying out its training mission while ensuring good management of this resource.

With California facing unprecedented drought conditions that led Gov. Jerry Brown to declare a state of water emergency in 2014, the Commanding General took two major steps in 2015 to reduce water consumption aboard the installation:

- Forming a Water Conservation Task Force (WCTF) to develop, implement, promote and enforce water conservation policies aboard the installation.
- Ordering the Combat Center and tenant commands to immediately reduce unnecessary potable water usage while simultaneously planning longer-term conservation initiatives.

Comprised of representatives from the Natural Resources and Environmental Affairs Division (NREA), Public Works Department, Lincoln Military Housing, Marine Corps Community Services, Family Housing and Bachelor Billeting, the task force is working to ensure the Combat Center complies with federal orders to reduce potable water consumption intensity by



Water Intensity EO 13693

36 percent by 2025 based on a baseline established in 2007. (See chart for Executive Order 13693 reduction goals).

In March 2015, a water conservation hotline — (760) 830-SAVE (7283) — went live, allowing callers to report when and where water is being wasted aboard the installation. Messages are checked twice daily and callers receive a return call informing them how the situation was resolved and thanking them for their diligence.

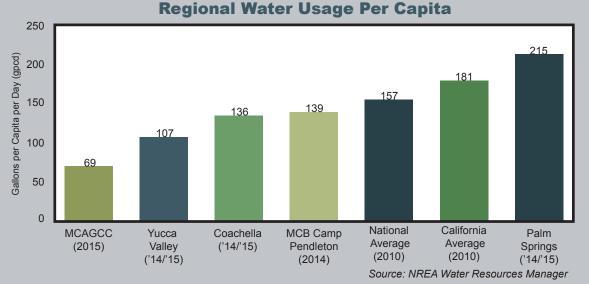
Also in 2015, NREA developed a Drought Response Policy, completed a water-meter study and began a public awareness and outreach campaign that included a poster contest for local children as well as distribution of water conservation brochures, door hangers and magnets. NREA/WCTF also established regulations and an enforcement process, improved water tracking, achieved a usage goal of 69.6 gallons of water per person per day and reduced total potable water use on the installation by more than 130 million gallons.

Ongoing water projects include:

- Working with Lincoln Military Housing to add low-flow aerators to home faucets as families move. As of January 2016, more than 2,100 aerators had been replaced.
- Reducing non-housing grass areas on the installation to lower daily irrigation demand. Since 2007, the amount of grass has been reduced from 47 acres to 27 acres, a savings of more than 265,000 gallons per day.
- Developing of a Water Conservation Plan that will allow the task force to determine what programs to utilize in the future.

Future projects include installing meters at key sites around the installation to improve usage monitoring, capturing storm water for reuse, and capturing water used for fundraising car washes and treating it for irrigation reuse.





How does the Combat Center compare to other areas and installations when it comes to using water? Very well, according to per-capita usage data compiled by the NREA Water Resources Manager. The installation uses 69 gallons per person per day, an amount lower than any other city in the Colorado River Region. The Combat Center has won numerous sustainability awards, including the 2010 and 2014 Secretary of the Navy Sustainability Non-Industrial, 2010 Secretary of the Navy Sustainability Team, 2015 Secretary of Defense Sustainability and Secretary of the Navy Environmental Quality, and 2016 Secretary of Defense Environmental Quality. The installation's water conservation program also has received endorsement from both California regional and state water boards.



Since 2007, non-housing grass areas aboard the Combat Center have been reduced from 47 acres to 28 acres, a savings of 265,232 gallons per day for irrigation demand. (NREA photo)

DID YOU KNOW?

The Combat Center has:

- Achieved a 54 percent reduction in water intensity by developing the Commanding General's Drought Response Policy to establish specific, installation-wide requirements; creating a Water Conservation Task Force; converting green space to desert landscaping; and installing synthetic turf and utilizing recycled and non-potable water in place of potable water. Water intensity is calculated by dividing the total amount of water used by the square footage of buildings on base.
- Implemented a specialized Oil/Water Separator cleaning process that saves 420,000 gallons of potable water annually.
- Implemented projects to eliminate the 136-acre open pond Wastewater Treatment Plant, cutting evaporative loss by 60 percent, making 320,000 gallons of water available for reuse annually, and reducing annual chemical costs by \$200,000.
- Established a public outreach, education and multimedia campaign focused on behavioral changes ensuring a long-term conservation mindset.



NATURAL RESOURCES

he Combat Center is home to a wealth of plant and animal species whose survival depends on the fragile desert ecosystem.

The Natural Resources and Environmental Affairs Division (NREA) ensures the Combat Center's mission through sustainable management of its precious natural resources.

At the heart of this program are strategies designed and implemented to comply with such federal laws as the Migratory Bird Treaty Act (MBTA) and the Endangered Species Act (ESA). Under the ESA, federal agencies are required to protect and promote the recovery of threatened and endangered species. The desert tortoise, a threatened species, is found throughout the installation.

One of the program's most important management tools is the Integrated Natural Resources Management Plan developed in consultation with the U.S. Fish and Wildlife Service, which uses an ecosystem approach and establishes a five-year plan outlining how the Combat Center can best support its military training mission while sustaining important natural resources within its boundaries.

To develop effective natural resources management strategies, NREA undertakes and sponsors extensive studies on the tortoise and other sensitive plant and animal species. At the installation's Tortoise Research and Captive Rearing Site (TRACRS), vulnerable hatchlings are protected until they can resist most predators. This proactive initiative was conceived to conserve the Combat Center's tortoise populations and to advance knowledge for species recovery. In September 2015, biologists released the first 35 tortoises raised at TRACRS into the wild. More releases are planned over the next few years until all 475 tortoises hatched at the site are integrated into the wild.

In support of regional goals, the Combat Center has partnered with the California Department of Fish and Wildlife to reintroduce Nelson's bighorn sheep to the installation. The Combat Center also partnered with the Society for Conservation of Bighorn Sheep to install wildlife watering stations at various locations.



DID YOU KNOW?

Desert tortoises can be found in Southern California, Nevada and Utah. Their numbers have decreased by 50 percent over the last decade in the west Mojave Desert. *Source: U.S. Fish and Wildlife Service*

NREA also works to maintain the health of the Combat Center's training lands by implementing desert restoration studies, land condition trend analysis, and installation-wide plant and soil surveys.

Additionally, it works with organizations like the Mojave Desert Land Trust to preserve critical habitat off the installation via the Department of Defense Readiness and Environmental Protection Integration (REPI) Program. For more information on REPI, see pages 22-23.

Prickly poppies in the Johnson Valley Shared Use Area. (Kelly O'Sullivan)

CULTURAL RESOURCES

The Natural Resources and Environmental Affairs Division (NREA) ensures the Combat Center's compliance with the National Historic Preservation Act and other laws and regulations governing cultural resources by conducting surveys and evaluations as well as implementing protective measures that integrate preservation requirements with the Marine Corps' training mission.

When Europeans arrived in the region, the area that now comprises the Combat Center was part of the Mojave, Serrano and Chemehuevi Indian tribal territories. Data collected from some of the archaeological sites indicate they lived in the area for at least 10,000 years.

In the 1880s, construction of railroads across the Mojave Desert brought miners to its more remote sectors. Several mining districts and abandoned mines are present on the installation.

The Combat Center also is home to some truly unique prehistoric archaeological sites, including the Foxtrot Petroglyph Site, one of the largest in the region. Valuable information on how Native Americans subsisted in the desert has been found at the installation's Surprise Springs and the Deadman Lake archaeological complexes.

Archaeological surveys and evaluations are ongoing, and thousands of sites likely will be located and recorded as they continue. Hundreds of sites have been evaluated and many found to be eligible for listing in the National Register of Historic Places, which makes them off-limits to training until mitigation measures are implemented.

The Combat Center has prehistoric archaeological sites and some significant paleontological deposits. The most notable, Gypsum Ridge, has yielded early Pleistocene fossils representing such fauna as the giant ground sloth, giant tortoise, Pleistocene horse, camel, llama and mastodon. At least four habitats have been defined — open grasslands; brushy, rocky uplands; well-watered grasslands; and a stream feeding a marsh, pond or lake. The site is currently dated to 1.8 to 2 million years ago, assigning the deposit to the early Pleistocene era.



This Clovis point found on the Combat Center is evidence of habitation as early as 10,000 to 13,000 years ago. (Kelly O'Sullivan)

DID YOU KNOW?

The Combat Center's cultural collections are housed at the Archeology and Paleontology Curation Center, a 2,500-squarefoot, environmentally controlled facility built in 2007. It also houses artifacts from the Marine **Corps Mountain Warfare Training** Center in Bridgeport, Calif.; Marine Corps Logistics Base Barstow, Calif.; and Marine Corps Air Station Yuma, Ariz. In 2013, NREA added 2,000 square feet of space to the facility, and the following year opened a display room showcasing artifacts including prehistoric fossils, arrowheads, pottery and objects left behind by miners in the 1800s. Outside, visitors will find several interpretive gardens used for outreach activities and available for self-guided tours.



The Tortoise Garden is one of several gardens Curation Center staff created using grant funds.

(Photos by Kelly O'Sullivan)

REPI Readiness and Environmental Protection Integration Program

The Combat Center has a reputation for excellent environmental stewardship of its training areas while maintaining a high level of mission readiness. Incompatible development surrounding the installation can have significant impacts on the Combat Center's ability to effectively train Marines and sailors.

Citizen reports of military training sounds, light pollution interference with military night operations and incompatible development underneath helicopter routes are all examples of external encroachment challenges facing the Combat Center.

The Department of Defense Readiness and Environmental Protection Integration (REPI) Program is designed to protect the military mission from external factors while simultaneously supporting conservation of valuable wildlife habitat. REPI supports win-win cost-sharing partnerships between the military, private conservation groups, and state and local governments.

Under the program, the partner purchases an environmentally important piece of land, then the military purchases a Restrictive Use Easement from the partner to limit development, indefinitely preserving the land for desert wildlife while protecting the Combat Center's training mission.

The installation actively uses the REPI program to mitigate these pressures on military training. Easements on strategically chosen conservation lands limit development in areas that would experience military training sounds under helicopter routes, and reduce light pollution in areas used for night training flights.

DID YOU KNOW?

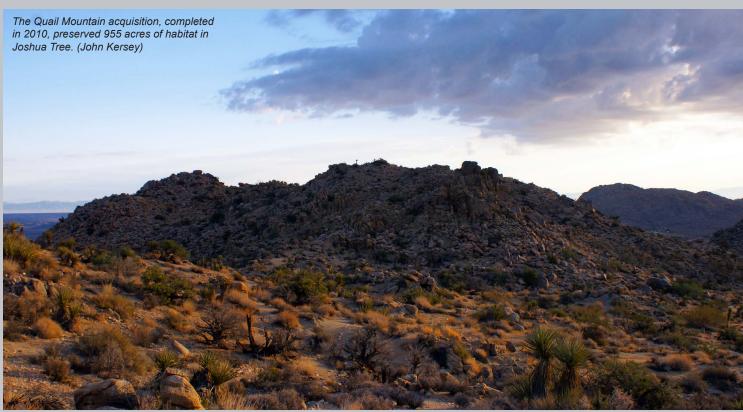
Through Fiscal Year 2015, the REPI program has protected 437,985 acres across the United States, benefiting the Department of Defense mission, local communities and the nation's natural resources.

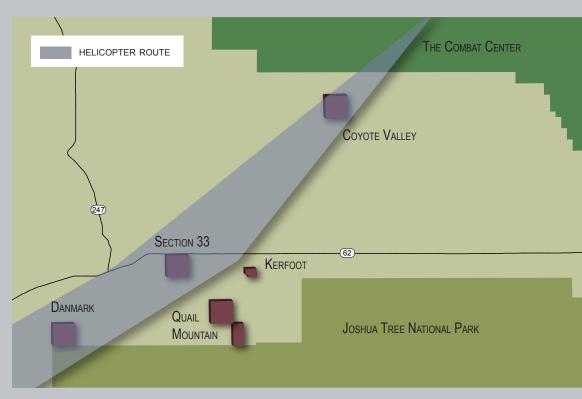
- 2016 REPI Report to Congress

As development around the Combat Center increases, less suitable habitat is available for desert wildlife, including the federally protected desert tortoise.

Development and recreational activities push the animals to find new habitat or degrade the wildlife corridors that provide a lifeline between "islands" of diminishing habitat. Because of its wide-open spaces, the installation could become one of the last islands of habitat if these wildlife corridors are not preserved.

Through the REPI program, the Combat Center has helped to conserve nearly 3,000 acres of land surrounding the installation while simultaneously protecting the Marine Corps' vital training mission by not being a sanctuary of last resort.





LOCAL REPI PROJECTS

- 2010 Quail Mountain 955 acres of desert tortoise habitat and desert view sheds preserved in Joshua Tree. Partners included the Mojave Desert Land Trust (MDLT), a local conservation agency.
- 2012 Section 33 623 acres of desert tortoise habitat preserved in Joshua Tree. Partners included MDLT and the Trust for Public Land (TPL).
- 2014 Coyote Valley 637 acres of desert tortoise habitat in Joshua Tree preserved through partnership with MDLT and TPL.
- 2016 Danmark 640 acres of desert tortoise habitat in Yucca Valley preserved through partnership with MDLT.
- 2016 Kerfoot 111 acres of desert tortoise habitat in Joshua Tree preserved through partnership with MDLT.



Clockwise from top left: A sign details the rules for use of Section 33. (Jim Bagley) A survey marker denotes the boundary between Joshua Tree National Park and the Quail Mountain area. (John Kersey) A large desert tortoise crosses "Tortoise Flats" in the Quail Mountain area. (John Kersey)



PROVOST MARSHAL'S OFFICE

The Provost Marshal's Office (PMO) — the Combat Center's police department — conducts law and order operations aboard the installation to provide a safe and secure environment for Marines, sailors, civilian employees and families.

PMO is comprised of 200 active-duty and civilian personnel working in three sections: Criminal Investigation Division (CID), Operations and Services. Included in these sections are Crime Prevention/Physical Security, Pass and Registration, Military Working Dogs, Special Reaction Team, Accident Investigation Division, Administrative Support, Training and Patrol Operations.

While PMO does not respond to incidents that occur off the installation, military police work closely with the San Bernardino Sheriff's Department during criminal investigations. The office also conducts joint training with the sheriff's department, the California Highway Patrol and Special Weapons and Tactics (SWAT) teams from various civilian law enforcement agencies.

CID investigates all reports of alleged, suspected and actual criminal conduct, and family violence, referring those that meet specific investigative thresholds to the Naval Criminal Investigative Service (NCIS). Other CID responsibilities include compiling and disseminating criminal intelligence impacting military readiness and force protection, managing PMO's Evidence Facility, maintaining capabilities to provide protective service details for visiting dignitaries and negotiators during crisis incidents, interfacing with NCIS for polygraph support, technical support and unique investigative resources, and liaising with local, county, state and federal law enforcement and investigative agencies, social service agencies and advocacy programs.

Operations personnel respond to calls for assistance, report criminal activity, and enforce laws, regulations and directives aboard the installation. Military and civilian police officers

apprehend and process suspects, enforce traffic regulations, investigate motor vehicle accidents, provide timely response to non-criminal service demands, provide escorts (money, ordnance), and provide information and assistance to personnel in need.



Joshua Tree Elementary School students explore the cab of the Provost Marshal's Office mobile command post under the watchful eye of Staff Sgt. Joshua Gerland. (Kelly O'Sullivan)

Services personnel process correspondence and maintain police records, train military and civilian police officers and register vehicles aboard the installation, as well as conduct Traffic Court, fingerprinting and background checks.

Crime Prevention/Physical Security personnel establish and revise policy, provide guidance and set forth uniform standards for physical security and loss prevention measures to safeguard personnel, property and materiel aboard the Combat Center by conducting physical security surveys (armories, ammunition supply points, money-holding facilities) and crime prevention surveys (barracks, recreation facilities). The section also maintains PMO's Lost and Found, compiles crime statistics, maintains the installation's Intrusion Detection Alarm System and supports local Drug Abuse Resistance Education (DARE) programs.

The Military Working Dog (MWD) Unit — the only working dog unit in the Morongo Basin — provides regional and global support for such events as presidential and other VIP visits requiring working dog support. MWD also provides drug dog support to local units and explosive dog support to surrounding law enforcement agencies.

In addition to DARE, the Provost Marshal's Office supports a number of community service activities including hosting crime prevention booths at events in the surrounding communities and completing identification safety kits for local children. The Combat Center's MWD team also conducts working dog demonstrations at schools and numerous events.

> Baby, a Military Working Dog with the Provost Marshal's Office K-9 unit, demonstrates a takedown technique with the unit's kennel master, Staff Sgt. Charlie Hardesty. (Cpl. Julio McGraw)

COMBAT CENTER FIRE

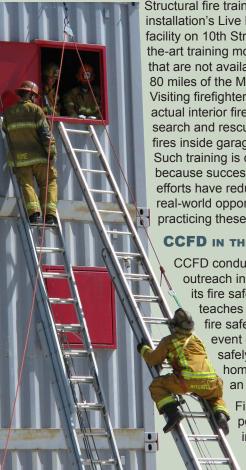
The Combat Center maintains mutual aid agreements with San Bernardino County and local municipalities related to collaborative response. The command responds to any request for mutual aid, regardless of scale.

The Combat Center Fire Department (CCFD) is the primary organization that responds to mutual aid calls off the installation. Established in August 1953 with one fire station, one engine company and three active-duty and civilian members, the department has grown to include 59 full-time career personnel, two fire stations, three engine companies, two advanced life support ambulances, a fire prevention division and a 24-hour E911 dispatch center.

In 2015, the fire department responded to 141 events in surrounding communities, often providing emergency response coverage for local fire departments. (See box at right for breakdown of responses.)

CRUCIAL TRAINING PROVIDED TO OUTSIDE FIREFIGHTERS

In 2015, CCFD hosted training sessions for 22 firefighters from surrounding communities.



Structural fire training was held in the installation's Live Firefighting Training facility on 10th Street using state-ofthe-art training modules and props that are not available within 80 miles of the Morongo Basin. Visiting firefighters practiced attacking actual interior fires and zero-visibility search and rescue as well as vehicle fires inside garage storage areas. Such training is critical to firefighters because successful fire prevention efforts have reduced the real-world opportunities for practicing these skills.

CCFD IN THE COMMUNITY

CCFD conducts public education outreach in the community via its fire safety trailer, which teaches children about home fire safety, what to do in the event of a fire and how to safely escape from their homes in case of an emergency.

> Fire department personnel participate in the Twentynine Palms Pioneer Days and Yucca Valley Grubstake Days



MUTUAL AID RESPONSES

In 2015, the Combat Center Fire Department responded to 141 events in the local communities, for a total of 425 personnel hours. A breakdown by community:

- Twentynine Palms: 59
- Joshua Tree: 13
- Wonder Valley: 32
- Yucca Valley: 12
- Amboy/Cadiz/ Interstate 40: 23
- Landara: 2
- Landers: 2

Left: Combat Center firefighters practice emergency escape procedures from multi-storied buildings. Above: A Combat Center firefighter (left) works with a Twentynine Palms firefighter at a structure fire off the installation. Below: Combat Center firefighters work at the scene of a rollover on Twentynine Palms Highway involving a truck carrying hazardous materials. (CCFD photos)



parades, annual holiday light parades and other community events throughout the year.

The department also hosts kindergarten and second-grade students from Condor, Palm Vista, Oasis and Twentynine Palms elementary schools on field trips and at open house events during their annual Fire Prevention Week activities.

In 2015, a total of 828 children — 578 from local elementary schools and 250 children participating in Combat Center Library reading programs and Armed Services YMCA programs — attended Fire Prevention Week activities at Fire Station 451 on the installation.

EDUCATION

Morongo Unified School District students who live in military housing

aboard the Combat Center board a

bus for transport to their respective

schools in Twentynine Palms.

(Cpl. Medina Ayala-Lo)

he Marine Corps takes seriously education at all levels. Combat Center staff work closely with local schools and colleges to ensure that students receive the best education possible.

ELEMENTARY AND SECONDARY EDUCATION

Under the Federal Impact Aid program, the federal government compensates school districts for educating the family members of federal employees, including armed forces personnel. In 2015, the Department of Defense (DoD) provided \$2.3 million in impact aid funds to Morongo Unified School District (MUSD).

MUSD operates 11 elementary schools,

two junior high schools and three high schools in the Morongo Basin, including Condor Elementary School aboard the Combat Center. Total enrollment at the beginning of the 2015-16 school year was 8,307 students. Of those students, 1,439 were children of active-duty service members, 678 were children of Combat Center civilian employees and 84 were children of employees of other federal agencies or other military installations in Southern California.

MUSD also participates in Military K-12 partners, a DoD Education Activity (DoDEA) Educational Partnership program that awards grants to public schools serving the children of active-duty service members. Since 2009, the district has received \$4.5 million in DoDEA grant funding for programs ranging from special education to language arts and math.

HIGHER EDUCATION

The Marine Corps encourages active-duty personnel and their college-age family members to pursue their education beyond high school, and the Combat Center has made educational opportunities available aboard the installation via traditional and online courses.

Copper Mountain College (CMC) in Joshua Tree, Mayfield College in Twentynine Palms, DeVry University and National University are the four local institutions that received military tuition assistance in 2015.

National University received \$238,467, which helped fund 301 courses; Mayfield College received \$194,999, which helped fund 44 courses, DeVry University received \$48,500, which helped fund 56 courses and CMC received \$8,330, which helped fund 46 courses.

In 2015, National University held 52 courses aboard the installation, with a total enrollment of 177 students. Of those, 34 were active-duty Marines, three were active-duty sailors, and 140 were family members, veterans or civilians. CMC conducted 37 courses on the installation, with 632 students enrolled. Of those, 416 were active-duty and 216 were family members, veterans or civilians. DeVry University held 24 courses on the installation, with 40 students enrolled. Of those, 13 were active-duty Marines and 27 were family members, veterans or civilians.





Left: The new Lifelong Learning Education Center opened in 2013 with 13 classrooms featuring state-ofthe-art education technology. Copper Mountain College, and National and DeVry universities also offer courses in the building.

Above: Professor Michael Chlebik works with students in his Probability and Statistics class at National University, Feb. 17, 2016. (Photos by Kelly O'Sullivan)

GIVING BACK

Combat Center Marines' and sailors' commitment to service extends far beyond their more publicly visible commitments to the nation. Their desire to give back extends to their surrounding civilian communities and can readily be seen through their work with civic and community organizations, philanthropic groups and other community service providers.

COMMUNITY SERVICE

One of the Combat Center's most visible community service activities is the annual Marine Corps Reserves' Toys for Tots campaign. In 2015, Company D, 4th Tank Battalion, a Reserve unit stationed here, collected and distributed more than 50,000 toys to 23,600 children in the Morongo Basin, Coachella Valley, Riverside and Fontana. The campaign directly supported 8,600 families and 65 nonprofit organizations. More than 100 Marines and sailors from the installation and Robert E. Bush Naval Hospital assisted in the campaign, helping to raise more than \$35,000.

Marines, sailors, civilians and family members also donate blood regularly. In 2015, Combat Center personnel and their families donated 872 pints of blood to LifeStream's La Quinta Donor Center, which serves hospitals in both the Hi- and low deserts, including Hi-Desert Medical Center in Joshua Tree and the naval hospital.

Blood is always sorely needed and patients pay as much as \$221 a pint in Southern California. The Combat Center's contribution to the regional blood supply in 2015 was valued at \$192,712 and up to 2,616 lives saved.

VOLUNTEERING



When they're not working, many caring members of the Combat Center community also make a difference by donating thousands of volunteer hours each year.

Marines, sailors, civilian employees and family members collect trash along Highway 62 and other roadways in the local communities, help build sets at community theaters, serve as docents at museums, art galleries and places like the Sky's The Limit Observatory and Nature Center. They serve as coaches and umpires for local parks and recreation sports programs and

mentor youths through scouting and programs like Young Marines. Some participate in youth and adult programs through their churches and help in after-school programs on and off campus. Still others make a difference by quietly helping neighbors in their respective communities.

In 2015, approximately 100 sailors from the hospital volunteered with Reach Out Morongo Basin (ROMB), a neighbors-helping-neighbors organization serving the elderly and infirm throughout the communities surrounding the installation. Working in groups of three to five, they cleaned up yards, helped with household moves and provided assistance organizing medications in addition to serving as a cheerful presence to those served by ROMB.

Over the course of the year, 20 hospital staff members volunteered 1,000 hours with the Department of the Navy's Drug Education for Youth (DEFY) program, including taking area youths ages 9 to 12 to a weeklong camp.

Many Marines, sailors and family members grew up volunteering in their hometowns, and carrying on that tradition of service in their adopted home gives them a sense of accomplishment and community pride.

They may only live in the Basin for a short time, but the difference many service members and their families make while they are here is long-lasting.



DID YOU KNOW?

In 2015, 62.8 million Americans spent 7.9 billion hours volunteering in their respective communities, an estimated economic value of \$184 billion.

Source: Corporation for National and Community Service, www.nationalservice.gov

Above: Marine Corps Communication-Electronics School students participate in a Toys for Tots donation run. (Lance Cpl. Levi Schultz)

Left: Master Sgt. David Mansfield recycles aluminum cans before the seven-mile Earth Day Mountain Bike Ride which began at the obstacle course and led participants into the hills behind Robert E. Bush Naval Hospital. (Cpl. Thomas Mudd)

Below: Sailors from the naval hospital work at the home of a Korean War veteran in Twentynine Palms during a Reach Out Morongo Basin project. (Photo courtesy of Robin Schlosser, ROMB)



COMMUNITY OUTREACH

The Combat Center strives to be a good neighbor to the communities surrounding the installation, and public outreach is a large part of that mission. The installation coordinates several programs that provide numerous opportunities for Marines, sailors, civilian employees and family members to interact with Morongo Basin residents and visitors throughout the year.

COMMUNITY RELATIONS

If you see Marines and sailors doing good work in the community, chances are they were organized by Community Relations staff, who receive requests from groups in the Morongo Basin and throughout Southern California, then work with commands aboard the installation to send military personnel to participate in those events.

Community Relations coordinates guest speakers, color guards, firing details, marching units and vehicles, K-9 demonstrations and static displays for events ranging from Memorial Day and Veterans' Day observances to Red Ribbon Week, Grubstake Days and Pioneer Days, as well as annual car shows and golf tournaments, Earth Day events, festivals, parades and celebrations around the region.

Marines and sailors from units aboard the Combat Center also work with community residents on projects including beautification and cleanups. In 2015, more than 20 students from the Marine Corps Communication-Electronics School participated in National Public Lands Day cleanup activities at the Big Morongo Canyon Preserve in Morongo Valley, and Marines, sailors and family members participated in cleanups at several sites around the Basin.

COMMUNITY LIAISON

Members of the Combat Center Community Liaison staff, a new section created in 2015, serve as a direct link between the installation and the community, supporting outreach efforts by Community Relations and Public Affairs staff. Their goal is to establish long-lasting relationships to explore potential partnerships that benefit both the installation and local communities.

Liaisons work closely with municipal governments in Twentynine Palms and Yucca Valley, and with San Bernardino County, Morongo Unified School District (MUSD), Copper Mountain College (CMC), the state of California

DID YOU KNOW?

Each year, the Community Relations section coordinates participation by nearly 1,000 Marines, sailors and family members in 100 community events throughout the region as part of the Combat Center's commitment to being a good neighbor.

and Joshua Tree National Park, among others. They also work closely with elected officials on the local, county, state and Congressional levels.

In addition, they regularly work with local chambers of commerce as well as nonprofit organizations like the Mojave Desert Land Trust, Basin Wide Foundation, Armed Services YMCA, Joshua Tree Gateway Communities Tourism Committee and others.

Under the Commanding General's Tours Program, visitors from the surrounding communities have a chance to see how Marines and sailors train, work and live. Tour participants learn about the Combat Center's rich history and its commitment to being a good neighbor by experiencing first-hand the installation's dedication to preserving



environmental, cultural and natural resources by touring places like the range recycling operation and the Archeology and Paleontology Curation Center. They also have an opportunity to visit sites like the Battle Simulation Center at Camp Wilson and one of several urban training ranges on the installation.

Resource Management Group



Jim Ricker, center, Combat Center assistant chief of staff, G-5, goes over a map of Johnson Valley with attendees of the Resource Management Group's informational meeting at the Johnson Valley Community Center, Nov. 21, 2015. The meeting was one of several held to inform the public about training in the Shared Use Area. (Kelly O'Sullivan) In 2014, the Marine Corps and Bureau of Land Management formed the Resource Management Group (RMG) to develop coordinated, but separate, management of the newly established Johnson Valley Shared Use Area.

Among the Combat Center's RMG duties is communicating Shared Use Area training schedules, safety and land-use changes to the public via meetings, educational briefings, mailings, website, social media pages, site visits, and printed and online brochures, maps and other products. The RMG also created a free, downloadable application for both Apple and Android devices that provides visitors to the Shared Use Area accurate information on when the area is closed for training as well as their proximity to the Combat Center's boundary.

SCHOOL LIAISON

Another way the Combat Center reaches out to the community is via the School Liaison's Adopt-A-School program, which pairs units from the

installation with elementary schools in the Morongo Basin. Participating Marines and sailors mentor students and serve as good examples of physical fitness, good citizenship and leadership.

Throughout the year, Combat Center personnel visit "their" elementary schools regularly, participating in physical education activities, reading to students and assisting with campus cleanups on Earth Day. They participate in special school events, including Red Ribbon Week, Science Fair judging, Read Across America Week/Dr. Seuss's birthday, career days, festivals and track and field competitions.

The School Liaison works with Community Relations personnel to host students aboard the installation for the annual Battle Colors Ceremony and Marine Corps Birthday Pageant. The office also supports requests for student tours. In 2016, students from La Contenta Middle School in Yucca Valley visited the Combat Center Fire Department, 1st Tank Battalion and the Archeology and Paleontology Curation Center, and 135 Twentynine Palms Junior High School Science Technology Engineering and Mathematics (STEM) visited the Combat Center for a sustainability tour that included the water treatment facility, solar fields and recycling center.

During annual job shadowing, MUSD high school juniors and seniors visit the installation and are paired with professionals in their field of interest. Between 2002 and 2016, more than 600 local students shadowed Combat Center personnel working in 38 career fields, including military police, welders, photographers, nurses, computer experts, Officers' Club hospitality staff, cooks, Marine Corps Exchange managers, mechanics, hair stylists, Sergeant's Course instructors, dental technicians, accountants and lawyers.

While supporting local events, many Marines, sailors and family members find a true reward in being part of an outstanding and welcoming community. While they miss their hometowns, the Basin quickly becomes their home away from home and they take great pride in making a difference here.

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THE COMBAT COMMITMENT TO YOU CENTER'S COMMITMENT TO YOU

The men and women who live and work aboard the Marine Corps Air Ground Combat Center have always enjoyed being part of the community. Active-duty personnel come and go from the installation as duty calls, but while they're here this is their home, and just like those who live here permanently, they want it to prosper.

Like you, Marines, sailors and their families want nice places to shop, great places to eat and interesting things to do. They want their children to love their schools, to remember their teachers and their coaches fondly, and they want every child to grow up and pursue their dreams knowing that the foundation provided here was a solid one.

Military family members want to make a difference in their jobs and in their service to the nation, and they want to make a difference in the lives of their families and yours. To that end, Combat Center personnel and their families will continue to spend their hardearned dollars locally whenever they can. They will work side by side with their civilian neighbors through professional and personal partnerships to improve the quality of life in each community, and they will continue to proudly call the Morongo Basin "home."

The communities surrounding the Combat Center have thrived in their ongoing relationship with the installation as active-duty and retired service members, civilian employees and their families have made their homes here.

Despite ever-changing demands on the Marine Corps, the Combat Center provides key support to its neighbors. The installation provides tangible and intangible support to the local communities via employment opportunities, numerous economic impacts and through mutual aid. On a personal level, Combat Center personnel provide community donations and thousands of hours of volunteer time each year. The Combat Center's presence here also provides tax revenues and infrastructure enhancements that benefit the entire Basin.

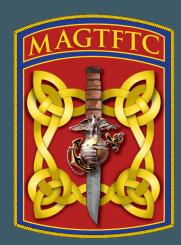
The Marine Corps' mission and the growing need for flexibility in training requirements make the installation's partnerships with surrounding communities ever more important to ensure that the Corps can meet the needs of the nation as America's crisis-response force.











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