

# Partners for a Compatible Future

Marine Air Ground Task Force Training Command,  
Marine Corps Air Ground Combat Center  
Twentynine Palms, California





# WHO WE ARE

The Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center (Combat Center) is the premier service-level, live-fire and maneuver training base in the Marine Corps.

Since 1952, Marines have relied on the Combat Center to prepare them for battle. In 2013, the original 935 square miles was expanded to 1,102 square miles, making the Combat Center the perfect venue for the realistic, combined-arms training required to prepare Marines to successfully complete combat missions across the globe. More than 50,000 active-duty and Reserve Marines and sailors, and other U.S. and allied forces train here 350 days a year.

Other training conducted at the Combat Center includes numerous exercises for warfighters, and Marines and sailors who support the infantry; bilateral training pairing Marine units and Coalition Partners; and advanced training for individual Marines in operations, intelligence, logistics and air elements.

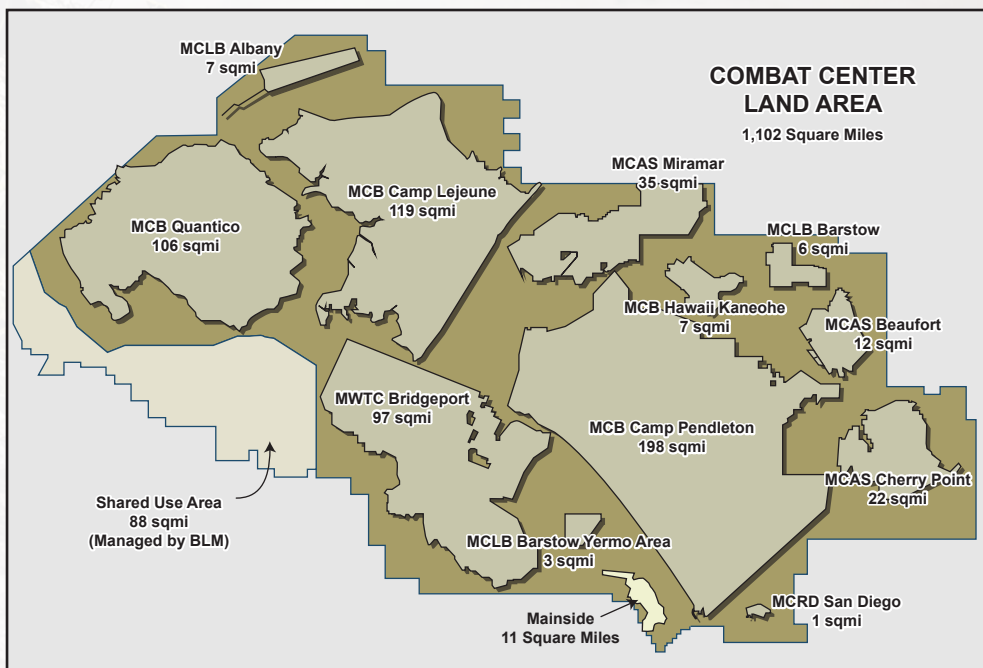
The Combat Center also is an ideal location for testing new equipment used by the Department of Defense to ensure that deployed equipment meets the needs of military operators before it's fielded to the fleet.



Global events over the last few decades, particularly the terrorist attacks of Sept. 11, 2001, catalyzed dramatic changes in the military. The need to protect America from new adversaries, combined with growing capabilities among the full spectrum of military operations, led to the need for more land and airspace in which to train with modern weapons systems and operational concepts. In 2001, the Marine Corps identified the scalable Marine air-ground task force (MAGTF) as its primary contingency force, resulting in the development of modernized training requirements.

In 2004, a Center for Naval Analyses study identified Twentynine Palms as the best location with enough potential land and airspace to support these requirements, but only if it was expanded to allow scalable MAGTF exercises consisting of simultaneous maneuvers for 48 to 72 hours in a live-fire, combined-arms exercise scenario.

That became reality nearly a decade later, when Congress approved, and the president signed into law the National Defense Authorization Act of 2014 (NDAA 2014), expanding the Combat Center's training lands into Johnson Valley, ensuring the Marine Corps can continue to successfully train Marines to respond to any crisis anywhere in the world, far into the future.





# ECONOMIC HIGHLIGHTS

The Combat Center is a major economic catalyst for the Morongo Basin, generating an estimated \$1.1 billion in total economic benefit to the regional economy, both directly and indirectly. Base operations and sustainment require significant expenditures that are critical to maintaining the Combat Center's mission to provide realistic, world-class live-fire combined-arms training for tenant units as well as Marine Corps and other military units from around the globe. As important as payroll and contract spending are to the base's military training mission, that spending also is critical to the region's economic stability.

The Combat Center employs approximately 11,497 military and 1,905 civilians, with an annual payroll of \$554 million. Base operations, personnel spending and visitor spending stimulate an estimated additional 3,838 jobs in the area.

The U.S. government is the world's largest buyer of products and services. The cost of keeping the Combat Center operating is expensive, and contracts are awarded through highly regulated federal processes that result in millions of dollars of private-sector contracts each fiscal year. The value of these contracts benefits both the Basin and the broader regional community. The Combat Center requires contract support for construction, utilities, supplies and equipment, telecommunications, janitorial services, maintenance and repair, and other services. In 2018, the Marine Corps spent approximately \$271 million on contracts at the Combat Center.

Construction activity on the base in 2018 included 79 active or completed construction and renovation projects. Significant projects included construction of the 30,000-square-foot, state-of-the-art Wilburn gymnasium, new family housing units and a new temporary lodging facility on Mainside.

Although the base generates a majority of its own energy through two cogeneration plants and solar arrays, the Combat Center purchases additional energy from Southern California Edison through a multi-year contract that amounts to \$8 million a year. In total, the base spends about \$15 million annual on utilities.

## Protect the Mission, Protect the Economy

Combat Center officials work with local, state and federal officials, as well as local residents to protect the Marine Corps' training mission and the Basin's economic health. By working together to avoid land-use decisions that could adversely impact training, such as siting a wind turbine energy project under a designated military aircraft training route, they also preserve the spectacular view sheds that fuel tourism, the Basin's second-largest economic driver. This synergistic approach of preserving air routes and view sheds provide a double economic benefit to the local communities.

## Contribution to Community Infrastructure

Infrastructure – buildings, roads, water pipes, gas and electrical lines, telephone poles, cable lines and streetlights – are critical to communities. The Basin's utility infrastructure benefits greatly from the Combat Center's presence. When the base's permanent and visiting populations spend money locally, San Bernardino County and the local municipalities receive increased tax revenues that are allocated to infrastructure improvements. In 2018, the Combat Center paid \$31 million in state and local taxes.

## Population

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

The area is a diverse mix of civilian and military. While most of San Bernardino County's population is concentrated in cities south of the San Bernardino Mountains, some areas in the Basin, particularly those closest to the Combat Center, have experienced growth rates that outpaced the nation, state and county. Twentynine Palms' population estimates include those living in on-base housing, since the installation's Mainside area was annexed into the city in 2000.

2018 Population		
Region	Total Population	Veteran Population
United States	327,167,434	18,939,219
California	39,557,045	1,666,143
San Bernardino County*	2,171,603	100,236
Twentynine Palms	26,418	2,651
Yucca Valley	21,726	2,461
Joshua Tree (CDP)**	7,020	682
Morongo Valley (CDP)**	3,231	307

Sources: U.S. Census Bureau, American Community Survey Estimates 2013-2017 and Measuring Communities 2018

\* indicates Measuring Communities 2018

\*\* Census-designated place (CDP)



# CHALLENGES TO THE MILITARY TRAINING MISSION

The Combat Center's primary mission is to conduct realistic, live-fire combined-arms training, urban operations and Joint/Coalition-level integration training that promotes the readiness of operational forces. Sustaining mission capabilities requires strong partnerships with federal, state and local governments, as well as with key stakeholders in surrounding communities and throughout the region to manage encroachment issues that could degrade mission capabilities.

## Challenges facing the Combat Center

Challenges to sustaining military readiness and training at the Combat Center include population growth and development adjacent to the base. Any factor that could negatively impact the Marine Corps' ability to conduct critical training that reduces realism and safety or limits the application of new technologies is carefully considered for mitigation to ensure the Marine Corps can continue to provide a world-class training environment that prepares Marines to succeed in combat.

Challenges include, but are not limited to:



Protected natural resources



Water supply and quality



Land use



Safety and security



Noise



Dark sky preservation



Airspace use



Cultural resources

## Compatible development

Certain types of land use and development can impact the Combat Center's ability to carry out its training mission by limiting access and use of ranges and airspace, driving threatened and endangered species into training areas, and causing competition for natural resources. Incompatible residential development near the base can result in residents experiencing unexpected dust or noise generated by military activities, while renewable energy projects can create obstructions that interfere with military airspace, radar or other technologies.

## Conservation and wildlife management

The Combat Center is home to desert wildlife and fragile habitats. The base is committed to being a good steward of the Mojave Desert ecosystem, and partners with other agencies to preserve, protect and promote the visibility of these resources for generations to come — not only on the base, but on surrounding lands. These efforts not only benefit the local community by preserving the unique desert ecosystem, but by preventing military training lands from becoming habitats of last resort for species, which could curtail critical training activities.



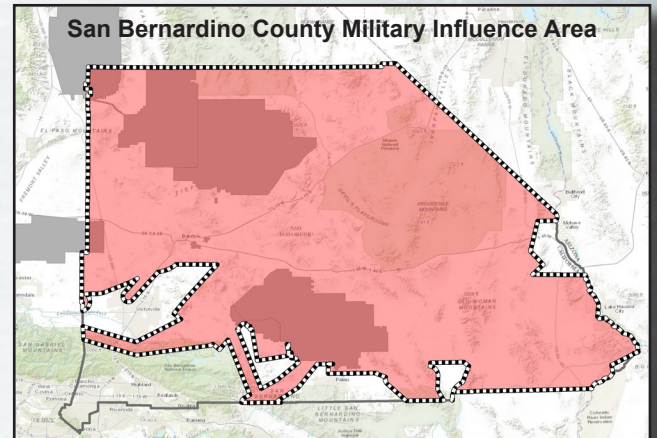


# PARTNERING AND COLLABORATION

The Combat Center Range Sustainability Management Office works with internal and external partners, and engages on multiple ongoing projects to ensure the viability of the military training mission. Those projects include:

## San Bernardino Countywide Plan Update

Range Sustainability personnel lead a working group with representation from the county's five military bases that collaborated with county officials to develop the first-ever base compatibility reference incorporated into the Countywide Plan. The compatibility reference is a set of policies and other tools that consider the roles and mission of each base. It seeks to support long-term military sustainability and compatible economic development through balanced and integrated approaches. In addition to specific policies, it provided guidance for developing collaborative partnerships among military and community stakeholders. Another component, the Military Influence Area map, is a comprehensive tool for land-use planning. It assists planners and developers in understanding areas adjacent to the bases that are critical to each base's ability to carry out its mission, including Special Use Airspace, low-level flight path and military training routes. Successful integration of the compatibility reference will result in policies, strategies and collaborative partnerships that support long-term military sustainability while achieving mutual goals for conservation, infrastructure, research and other topics.



## Governor's Office of Personnel and Readiness

The Governor's Office of Personnel and Readiness (OPR) serves California's governor and cabinet as staff of long-range planning and research, and constitutes the comprehensive state planning agency. Range Sustainability personnel participated in workshops that OPR held throughout the state to review existing state policies for compatible land use as defined in the San Bernardino Countywide Plan.



## Western Mojave Route Network

The West Mojave Route Network Project is an off-road vehicle and transportation plan that covers approximately 9.1 million acres of Bureau of Land Management (BLM) public land across San Bernardino, Los Angeles, Riverside, Inyo and Kern counties. The plan intends to amend and supplement the 2006 West Mojave Plan and the 2016 Desert Renewable Energy Conservation Plan (DRECP). The Combat Center and other military bases in the Mojave Desert (Naval Air Weapons Station China Lake, National Training Center Fort Irwin, Edwards Air Force Base and Marine Corps Logistics Base Barstow) continue to coordinate with Marine Corps Installations West and the BLM to ensure that critical base ingress, base egress and training routes remain intact. They also reviewed the project to inform the BLM on network trails that pose safety, security and natural resource management issues.

## Desert Renewable Energy Conservation Plan

DRECP is a landscape-level renewable energy and conservation plan that seeks to balance protection and conservation of desert ecosystems while allowing for appropriate development of renewable energy projects. The plan created conservation, recreation and renewable energy zones across 10.8 million acres of California desert, and was established after thorough environmental review and stakeholder comment. The Department of Defense provided considerable input on the plan before its establishment and when it reopened for comment in 2018. DRECP provides certainty on land-use planning for communities, industry and conservation goals, and supports certain military land-use compatibility needs.



# PARTNERING AND COLLABORATION

## Mojave Trails National Monument

The Combat Center and Department of Defense Working Group have worked with the BLM to ensure military mission requirements are fully considered in the development of the Mojave Trails National Monument Resource Management Plan (RMP). Managed by the BLM, the monument spans 1.6 million acres of federal lands between Barstow and Needles, California, including more than 350,000 acres previously dedicated by Congress as wilderness. Because the monument is contiguous to military bases, encompasses land used by the military for ground movement, lies under military airspace and training routes and affects regional natural resources, the RMP is a critical opportunity to address and mitigate military encroachment concerns. This partnership has been ongoing since the monument's establishment in 2016.

## Dark Sky Ordinance Committee

The Combat Center has a strong commitment to protecting natural resources that support its training mission, including the preservation of the area's dark night skies. Range Sustainability personnel regularly attend local Dark Sky Ordinance Committee meetings to provide information on light pollution's impacts to military training for incorporation and consideration into the local ordinance. Light pollution can limit effective nighttime training activities that are critical to simulate realistic combat situations, and to utilize night-vision equipment and technologies. Protection of the region's dark skies is increasingly important as population growth, development and increasing light pollution occurs in the nearby communities of Yucca Valley and Twentynine Palms, as well as the Coachella Valley, Inland Empire, Los Angeles and Las Vegas regions. Light pollution adversely affects the military training mission, and impacts local communities and wildlife. The Combat Center conducted a Night Sky Study in February 2017 to illustrate the base's considerable investments in reducing its light pollution footprint, and those benefits to both the Combat Center and surrounding communities.



## Readiness and Environmental Protection Integration Program

Maintaining realistic training capability and military readiness are critical to achieving success on the battlefield. The Readiness and Environmental Protection Integration (REPI) Program is the Department of Defense's core effort to protect military readiness by preventing incompatible development, increasing base resiliency, and preserving habitat through buffer projects, partnering, supportive education, engagement and regional planning.

As of 2019, the Combat Center has protected 5,462 acres of land through the REPI program, providing important encroachment buffers to the base while contributing to the preservation of local natural habitat areas. The Combat Center's current REPI partners include Mojave Desert Land Trust, Trust for Public Lands, The Conservation Fund, San Bernardino County Community Services Area 20 and California Parks and Recreation.



### COMBAT CENTER PARTNERSHIPS

#### Key external stakeholders

- Bureau of Land Management
- California Department of Parks and Recreation
- Copper Mountain College
- Mojave Desert Land Trust
- National Park Service

#### Additional external stakeholders

- Selected state officials
- Regional organizations' leadership and selected departments
- Local elected government officials
- Local government management and selected departments
- Non-government organizations and special interests
- Business community
- Land owners
- Public

#### Internal stakeholders

- Combat Center leadership
- Community Plans Liaison Officer and planners
- Range Control
- Airfield operations
- Air traffic control
- Environment
- Natural and cultural resources
- Public Affairs
- Public Works
- Tenant commands





For more information on the Combat Center's military training mission,  
please visit [29palms.marines.mil](http://29palms.marines.mil)