



# U.S. MARINE CORPS

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CONCEPTS & PROGRAMS 2013

*America's Expeditionary Force in Readiness*



*Includes The Marine Corps Almanac*



# CONCEPTS & PROGRAMS 2013



U.S. MARINE CORPS



## A MESSAGE FROM THE COMMANDANT OF THE MARINE CORPS

*Concepts and Programs 2013* provides a status update of the United States Marine Corps. Drawing on our role as the Nation's Expeditionary Force in Readiness, we have long recognized that our continued success depends on our capacity to prepare for, and adapt to the ever-changing global security environment. Marines are expeditionary by nature and maintain a high state of readiness by design. We are proud of what our Corps — in close partnership with the Navy — contributes to America's forward presence and power projection. Combined with the unique contributions of joint and coalition partners, these capabilities provide America with a potent and versatile military arsenal.

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Our achievements since September 11, 2001 are testament to our long history of innovation. The dynamic nature of conflict and competition for technological advancement steels our resolve to ensure that Marines are armed with the necessary weaponry, doctrine and equipment necessary to maintain an operational advantage in any engagement. Our focus is not limited to equipment and weapons systems, but reflects the development of new operational concepts and organizational realignments.

*Concepts and Programs 2013* is an excellent resource to better understand the Corps, our capabilities, and the course we have charted for the future. Optimizing the Marine Corps is a process, not an end-state, and spans years of investment and experimentation. The results of this continuous process will yield an increasingly lethal, diverse and versatile array of capabilities we consider vital to meet the demands of an uncertain security environment.

Semper Fidelis,

A handwritten signature in black ink, appearing to read 'James F. Amos', is centered below the text 'Semper Fidelis,'.

James F. Amos  
General, U.S. Marine Corps

# U.S. MARINE CORPS

## CONCEPTS & PROGRAMS 2013

### TABLE OF CONTENTS

<b>A MESSAGE FROM THE COMMANDANT OF THE MARINE CORPS</b> . . . . .	ii	U.S. Marine Corps Forces Pacific Organizational Chart . . . . .	23
<b>CHAPTER 1:</b> <b>America’s Expeditionary Force in Readiness</b> . . . . .	1	U.S. Marine Corps Forces Pacific Units . . . . .	24
<b>CHAPTER 2: Organization</b> . . . . .	10	U. S. Marine Corps Forces, Special Operations Command (MARSOC) . . . . .	27
Introduction . . . . .	11	MARSOC Organizational Chart . . . . .	29
Marine Air Ground Task Force (MAGTF) . . . . .	12	U.S. Marine Corps Forces, Reserve . . . . .	30
Multi-Mission Capable MAGTFs . . . . .	12	U.S. Marine Corps Forces, Reserve Organizational Chart . . . . .	30
MAGTF Composition . . . . .	12	U.S. Marine Corps Forces, Reserve Units . . . . .	31
Types of MAGTFs . . . . .	13	U.S. Marine Corps Forces, Cyberspace (MARFORCYBER) Command . . . . .	32
Unique Combatant Commander Support . . . . .	15	MARFORCYBER Subordinate Units . . . . .	32
MAGTF Sustainability . . . . .	16	MARFORCYBER Organizational Chart . . . . .	32
Maritime Prepositioning Force (MPF) . . . . .	16	Installations . . . . .	33
Marine Corps Prepositioning Program - Norway (MCPN) . . . . .	16	Marine Corps Installations Command (MCICOM) . . . . .	33
Headquarters, U.S. Marine Corps . . . . .	17	Marine Corps Logistics Command (MCLC) . . . . .	33
Headquarters, U.S. Marine Corps Organizational Chart . . . . .	17	Commanding General, Marine Corps Logistics Command Organizational Chart . . . . .	34
Operating Forces . . . . .	18	<b>CHAPTER 3: Programs</b> . . . . .	36
U.S Marine Corps Forces Command (MARFORCOM) . . . . .	18	Introduction . . . . .	37
U.S. Marine Corps Forces Command Organizational Chart . . . . .	19	Acquisition Categories (ACAT) and Terms . . . . .	38
U.S. Marine Corps Forces Command Units . . . . .	20	<b>PILLAR 1: High Quality People</b> . . . . .	43
U.S. Marine Corps Forces, Pacific (MARFORPAC) . . . . .	22	<b>Section 1: Manpower</b> . . . . .	44
		Introduction . . . . .	45
		Force Structure Review/Drawdown in Forces . . . . .	46



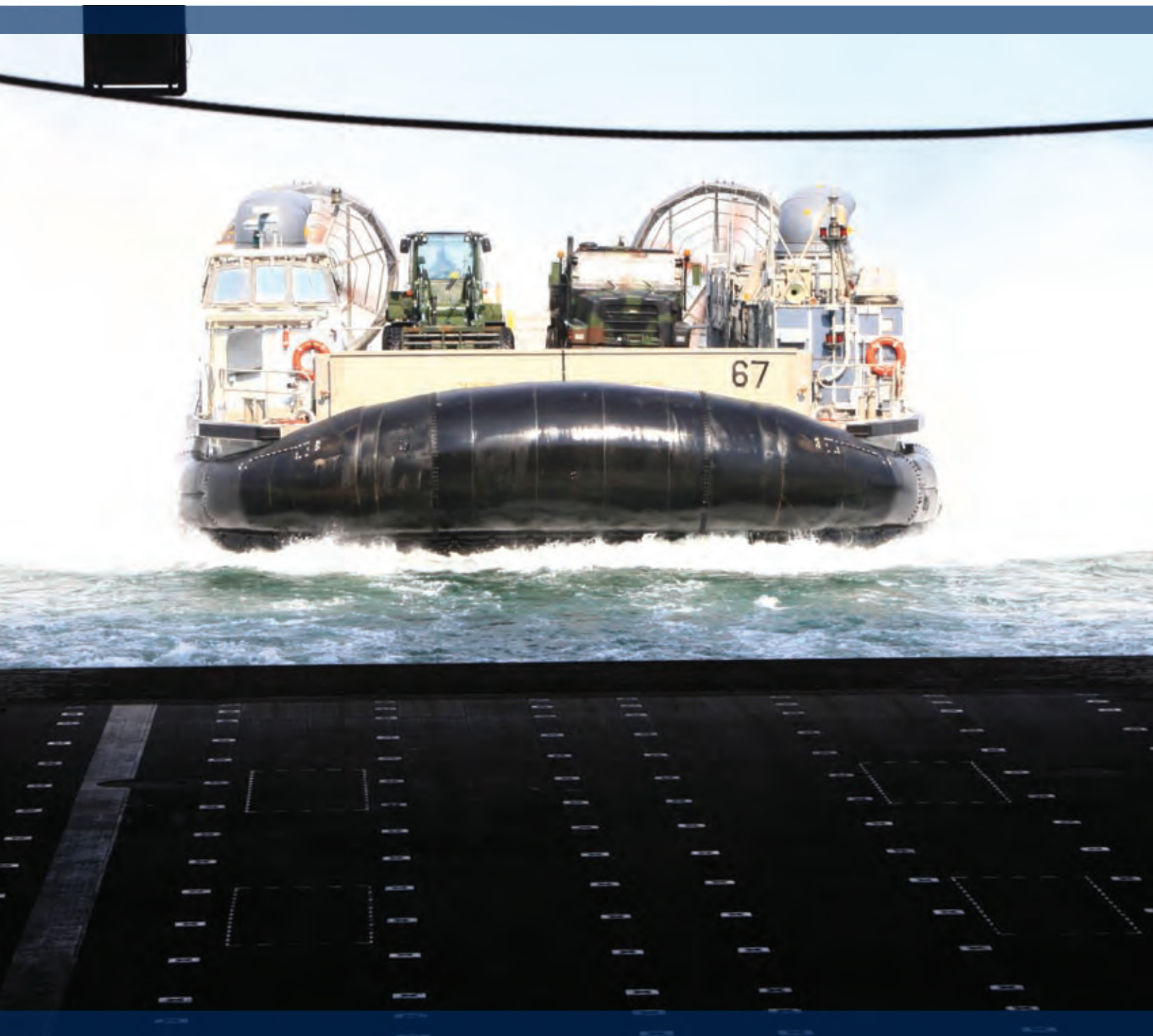
End Strength . . . . .	46	<b>Section 3: Investing in the Education and Training of our Marines</b> . . . . .	78
Marine Corps Recruiting Command (MCRC). . . . .	47	Introduction . . . . .	79
Diversity . . . . .	47	Training and Education Command (TECOM) Organization . . . . .	80
Manpower Recruiting . . . . .	47	Courses and Facilities . . . . .	81
Marine Corps Recruiting Information Support System (MCRISS). . . . .	49	Training . . . . .	81
Marine Corps Retention . . . . .	50	MAGTF Training. . . . .	81
Marine Corps Reserve. . . . .	51	Predeployment Training Program (PTP) . . . . .	81
Civilian Marines . . . . .	51	Command and Control Training and Education Center of Excellence (C2TECOE) . . . . .	83
<b>Section 2: Education</b> . . . . .	54	Marine Corps Tactics and Operations Group (MCTOG) . . . . .	84
Marine Corps University (MCU) and Professional Military Education (PME) . . . . .	55	Marine Corps Logistics Operations Group (MCLOG) . . . . .	86
College of Distance Education and Training (CDET) . . . . .	56	Joint, Interagency, and Multinational (JIM) Training . . . . .	87
<b>PILLAR 2: Unit Readiness</b> . . . . .	59	Future Training: MAGTF Training Program . . . . .	88
<b>Section 1: Keeping Faith With Marines, Sailors, and their Families.</b> . . . .	60	Training and Education Enablers. . . . .	89
Introduction . . . . .	61	Marine Corps Training Information Management System (MCTIMS) . . . . .	89
Defense Readiness Reporting System-Marine Corps (DRRS-MC) . . . . .	62	Modeling and Simulations (M&S) . . . . .	90
Medical Readiness Reporting System (MRRS). . . . .	62	Mission-Capable Training Ranges. . . . .	91
Family Support Programs. . . . .	63	Combined Arms Command and Control Trainer Upgrade System (CACCTUS) . . . . .	93
Integrated Behavioral Health . . . . .	64	Squad Immersive Training Environments (SITE) . . . . .	94
Sexual Assault Prevention & Response . . . . .	65	Supporting Arms Virtual Trainers (SAVT) . . . . .	94
Wounded Warrior Regiment (WWR). . . . .	65	Marine Corps History Division . . . . .	95
Semper Fit and Recreation/Exchange Services. . . . .	66	National Museum of the Marine Corps (NMMC) . . . . .	96
Personal and Professional Development . . . . .	67	Center for Advanced Operational Culture and Learning (CAOCL) . . . . .	97
<b>Section 2: Equipping the Marine</b> . . . . .	68	<b>Section 4: Fire Support</b> . . . . .	100
Introduction . . . . .	69	Introduction . . . . .	101
M27 Infantry Automatic Rifle (IAR). . . . .	70	High Mobility Artillery Rocket System (HIMARS) . . . . .	102
Marine Expeditionary Rifle Squad (MERS) . . . . .	70	Lightweight 155mm Howitzer (LW155) . . . . .	103
Family of Ballistic Protection Systems (FBPS) . . . . .	71	Advanced Field Artillery Tactical Data System (AFATDS) Family of Systems. . . . .	104
Clothing and Flame Resistant Organizational Gear (FROG) . . . . .	73	Family of Target Acquisition Systems (FTAS). . . . .	105
Family of Mountain Cold Weather Clothing and Equipment (FMCWCE) . . . . .	74	Escalation of Force-Mission Module (EoF-MM). . . . .	106
Squad Thermal Sight (STS) . . . . .	75	<b>Section 5: Command and Control/ Situational Awareness (C2/SA).</b> . . . . .	108
Route Reconnaissance and Clearance (R2C) Family of Systems . . . . .	75	Introduction . . . . .	109

Aviation Command and Control System (AC2) Family of Systems (FOS) and MACCS FOS Sustainment . . . .	110	<b>PILLAR 4: Infrastructure Sustainment</b> . . . . .	151
Global Command and Control System-Tactical Combat Operations (GCCS-TCO) System . . . . .	111	<b>Section 1: Providing Capable Bases and Stations</b> . .	152
Common Aviation Command and Control System (CAC2S) . . . . .	112	Introduction . . . . .	153
Theater Battle Management Core System (TBMCS) . .	113	Installations and Military Construction . . . . .	154
Combat Operations Center (COC) . . . . .	113	Infrastructure Sustainment . . . . .	154
Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) . . . . .	114	Installations Energy. . . . .	154
<b>Section 6: Expeditionary Energy</b> . . . . .	116	Range Modernization/Transformation (RM/T) . . . . .	155
Introduction . . . . .	117	Housing . . . . .	156
Expeditionary Energy: From Bases to Battlefield . . . .	118	Environmental, Natural, and Cultural Resources Stewardship . . . . .	157
<b>Section 7: Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE)</b> . . . . .	122	<b>PILLAR 5: Equipment Modernization</b> . . . . .	159
Introduction . . . . .	123	<b>Section 1: Equipping the Marine</b> . . . . .	160
MCISRE Construct . . . . .	125	Follow-On-To Shoulder Launched Multi-Purpose Assault Weapon (FOTS) . . . . .	161
Operational Overview . . . . .	125	Marine Enhancement Program (MEP) . . . . .	161
<b>Section 8: Expeditionary Logistics</b> . . . . .	128	Family of Improved Load Bearing Equipment (FILBE) . . . . .	162
Introduction . . . . .	129	Family of Individual Warfighter Equipment (IWE) . . .	163
Electronic Maintenance Support System (EMSS) . . . .	130	<b>Section 2: Ground Combat Tactical Vehicles</b> . . . . .	166
Family of Field Medical Equipment (FFME) . . . . .	130	Mobility for the 21st Century. . . . .	167
Marine Corps Family of Power and Environmental Control Equipment . . . . .	131	Ground Combat Tactical Vehicle Strategy (GCTVS) . .	168
Family of Combat Field Feeding Systems . . . . .	132	Assault Amphibious Vehicle (AAV7A1) Family of Vehicles Upgrade . . . . .	169
<b>Section 9: Preparing for Tomorrow's Fight</b> . . . . .	134	Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FOV) . . . . .	170
Introduction . . . . .	135	Amphibious Combat Vehicle (ACV) . . . . .	171
Marine Corps Security Cooperation Group (MCSCG) . . . . .	136	Marine Personnel Carrier (MPC) . . . . .	172
<b>PILLAR 3: Capability &amp; Capacity to Meet DoD Strategic Requirements</b> . . . . .	139	High Mobility Multipurpose Wheeled Vehicle (HMMWV) . . . . .	173
<b>Section 1: Amphibious and Pre-positioning Ships</b> . .	140	Medium Tactical Vehicle Replacement (MTVR) . . . . .	173
Naval Expeditionary Capability in the 21st Century . .	141	Logistics Vehicle System Replacement (LVSR) . . . . .	175
Maritime Support to Expeditionary Operations . . . .	142	<b>Section 3: Aviation</b> . . . . .	176
Amphibious Warships . . . . .	144	Aviation Strategy for the 21st Century . . . . .	177
Landing Craft Air Cushion (LCAC)/ Ship-to-Shore Connector (SSC) . . . . .	146	F-35B Short Take-Off Vertical Landing (STOVL) and C (Carrier Variant) Lightning II Joint Strike Fighter (JSF) . . . . .	178
Evolution of Maritime Prepositioning . . . . .	146	Joint Strike Fighter (JSF) Transition Plan . . . . .	179
Joint High Speed Vessel (JHSV) . . . . .	148	Marine Air Ground Task Force Electronic Warfare (MAGTF EW) . . . . .	179
		MV-22B Osprey . . . . .	181

H-1 Upgrades (UH-1Y Venom/AH-1Z Viper) . . . . .	182	Counter Radio-Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW) . . . . .	214
KC-130J . . . . .	183	<b>Section 6: Intelligence, Surveillance and Reconnaissance</b> . . . . .	216
CH-53K Heavy Lift Helicopter . . . . .	184	Distributed Common Ground System-Marine Corps (DCGS-MC) Enterprise . . . . .	217
Unmanned Aircraft Systems (UAS) . . . . .	186	Intelligence Analysis System (IAS) Family of Systems (FOS) . . . . .	217
AN/TPS 80 Ground/Air Task Oriented Radar (G/ATOR) . . . . .	188	Technical Control and Analysis Center (TCAC) . . . . .	218
P-19A Aircraft Rescue and Fire Fighting (ARFF) Vehicle Replacement (P-19R) . . . . .	189	Sensitive Compartmented Information Communications (SCI Comms) . . . . .	219
<b>Section 4: Fire Support</b> . . . . .	192	Counter Intelligence and Human Intelligence Equipment Program (CIHEP) . . . . .	219
Expeditionary Fire Support System (EFSS) . . . . .	193	MAGTF Secondary Imagery Dissemination System (MSIDS) . . . . .	220
Target Location, Designation, and Hand-off System (TLDHS) . . . . .	193	Remote Video Viewing Terminal (RVVT) . . . . .	221
Mission Payload Module–Non-Lethal Weapons System (MPM-NLWS) . . . . .	194	Wide Field of View Persistent Surveillance (WFVPS) . . . . .	221
Ocular Interruption System . . . . .	195	21st Century Marine Expeditionary Intelligence Analysis (MEIA-21) . . . . .	222
Disable Point Target (DPT) . . . . .	196	Tactical Exploitation of National Capabilities (TENCAP) . . . . .	223
DoD Non-Lethal Weapons Program . . . . .	196	Team Portable Collection System Multi-Platform Capable (TPCS-MPC) . . . . .	223
<b>Section 5: Command and Control/ Situational Awareness (C2/SA)</b> . . . . .	198	Intelligence Support to Cyberspace Operations . . . . .	224
Introduction . . . . .	199	<b>CHAPTER 4: Marine Corps Almanac</b> . . . . .	226
Marine Air Ground Task Force (MAGTF) Command and Control Vision Statement . . . . .	200	Introduction . . . . .	227
Marine Corps Information Enterprise (MCIENT) Strategy . . . . .	200	Active Officer Data . . . . .	228
MCIENT Core Components . . . . .	203	Active Enlisted Data . . . . .	231
Marine Corps Enterprise Information Technology Services (MCEITS) . . . . .	204	Reserve Officer Data . . . . .	235
Global Combat Support System-Marine Corps (GCSS-MC) . . . . .	205	Reserve Enlisted Data . . . . .	237
Composite Tracking Network (CTN) . . . . .	206	Marine Corps Fiscal Resource Overview Chart . . . . .	239
Joint Battle Command- Platform (JBC-P) Family of Systems . . . . .	207	FY12 TOA Chart . . . . .	240
Networking On-the-Move (NOTM) Increment 1 . . . . .	207	FY12 Appropriations Chart . . . . .	240
Tactical Networking Systems . . . . .	208	Marine Corps Procurement Chart . . . . .	241
Tactical Communication Modernization (TCM) . . . . .	210	Marine Corps Ground Equipment Age Chart . . . . .	241
Tactical Data Network (TDN) Data Distribution System- Modular (DDS-M) . . . . .	211	Marine Corps Aircraft Age Chart . . . . .	242
Ground-Based Air Defense Transformation (GBAD-T) . . . . .	212	<b>INDEX</b> . . . . .	243
AN/TPS-59(V)3 Radar System . . . . .	212		
Identity Dominance System (IDS) . . . . .	213		



# CHAPTER 1



## THE UNITED STATES MARINE CORPS: AMERICA'S EXPEDITIONARY FORCE IN READINESS

The Marine Corps is America's Expeditionary Force in Readiness — a balanced air-ground-logistics team. We are forward deployed and forward engaged, shaping, training, deterring, and responding to all manner of crises and contingencies. We create options and decision space for our Nation's leaders. Alert and ready, we respond to today's crisis with forces available today. Responsive and scalable, we team with other Services, interagency partners, and allies. We enable and participate in joint and combined operations of any magnitude. A "middle-weight" force, we are light enough to get there quickly, but heavy enough to carry the day upon arrival, and capable of operating independent of local infrastructure. We operate throughout the spectrum of threats — irregular, hybrid, conventional — particularly in the gray areas where they overlap. Marines are always ready to respond whenever the Nation calls... wherever the President may direct.

*General James F. Amos, USMC  
Commandant of the Marine Corps*

### STRATEGIC DEMANDS AND THE SECURITY ENVIRONMENT

The United States is a maritime nation, whose interests are inextricably wound in the networks of global trade and a stable international order. Ours remains the world's largest economy, critically dependent on the global commons for our livelihood, as more than 90 percent of the world's commerce travels by sea.

Protecting our citizens, allies and interests in this global system is vital for our prosperity and security. While the United States seeks peace and stability, armed intervention is sometimes necessary to preserve them. History reminds us that, no matter how strong our conventional capabilities may be, clever en-



emies find “windows of vulnerability” to exploit. This human dimension creates vast uncertainties and demands a security establishment capable of responding to a wide range of threats.

As we look ahead, we see a world of increasing instability, failing states, and conflict provoked by both conventional enemies and transnational threats. The complexity and scope of conflict continues to evolve and change rapidly. Both friends and potential enemies are increasingly bound through economic interdependence, shifting balances of power, and the effects of the information age. The information age and globalization have brought a diffusion of military power, to a greater number of states and to non-state and criminal actors. Global stressors such as poverty, urbanization, overpopulation, competition over scarce natural resources, and natural disasters increase tension and instability.

While millions have benefitted from globalization, millions of others have suffered social and economic

disruptions. Those who perceive themselves as “left out” of a globalizing world are ripe for exploitation by rogue states, non-state actors, and criminal elements that thrive in the chaotic margins of the global order. Irregular challenges are thus becoming the new “regular” in the future security environment as terrorism, economic warfare, and cyber warfare present new modes of competition.

Much of the world’s population is concentrated along the world’s coastlines. These littoral regions are linked to our national interests and the global economy and are the primary operating area for our Navy-Marine Corps team. Our naval and maritime capabilities are designed to address the range of instabilities and threats found in the critical seam between the water and the land. Naval expeditionary forces provide an important backstop for today’s unpredictable threats. Forward-deployed Marines represent the Nation’s insurance policy against the threats and disruptions in the global security environment.



## THE ROLE OF THE MARINE CORPS

Today's Marine Corps is purpose-built for the current and future security environments. The Marine Corps is the right force, at the right time, contributing the right capabilities to the defense of our nation and its interests around the globe. Our potential enemies are observant, adaptive, and cunning. They strike without warning, often in places and at times we least expect. Our Nation needs a force ready to move toward the sound of chaos, responding swiftly to crisis and creating the space and time for strategic decision-making. America needs a forward-deployed force capable of defending its interests, even when access is denied. Our nation has such a force. They are called Marines.



The Marine Corps is a naval service, operating in close partnership with the world's greatest Navy. Together, we share a remarkable heritage that predates the signing of our Constitution. Together, we leverage the access provided by the sea to protect the vast

global commons, while ensuring our ability to project our national power and influence into the littoral regions. Naval forces deter aggression through forward presence, contain crises, respond to natural disasters, and buy strategic decision time for our nation's leaders. Well-trained Navy-Marine teams are located off the coast of anticipated crisis areas every day, poised to swiftly respond.

The flexibility of the Marine Corps and its amphibious capabilities align the service well with the security demands articulated in the 2012 *Strategic Guidance for the 21st Century*. The Marine Corps value in a wide range of missions, its ability to operate without a large footprint ashore, and its ability to scale up in times of crisis make them an essential tool for national decision-makers and joint commanders. Marines smoothly integrate with the other elements of the joint force, enable interagency efforts, and are a natural partner to special operations. Where U.S. citizens, allies or interests are threatened, maritime response capabilities provide a range of rapid intervention options. When conflict escalates, their ability to conduct forcible entry operations in a major contingency serves as a rheostat for the thoughtful and appropriate application of military power.

## MARINE CORPS OPERATIONS

During the past year, the Marine Corps has been actively engaged around the world. While continuing to meet operational commitments in Afghanistan, the Marine Corps simultaneously worked with over ninety allies and partners to build effective institutions that contribute to global stability and security. Marines continue to respond to global crises as they emerge, with two-thirds of the Marine Corps operationally committed on a daily basis. Even while providing a significant contribution to Operation Enduring Free-

dom (OEF), our Marine Expeditionary Units (MEUs) and other task-organized Marine Air Ground Task Forces (MAGTFs) supported national security objectives throughout the globe. Marines provided forward presence, deterrence, and theater security cooperation activities, and contributed to building partner capacities in every geographic combatant command.

### Afghanistan

The Marine Corps' number-one priority is providing the best trained and equipped Marine units to Afghanistan. Over 7,000 Active and Reserve Marines remain engaged in operations in the Helmand and Nimroz provinces in Regional Command Southwest (RC-SW). Marines, along with nine Coalition partners and 32,000 Afghan National Security Forces in RC-SW, strive to deny the Taliban safe haven, restore stability to the most violent regions of Afghanistan, and give hope to the Afghan people. We have made significant progress in degrading the Taliban's ability to organize and disrupt the efforts of the Afghan government, while building Afghan security institutions and improving the political and social conditions within RC-SW.

As the Afghan government's ability to provide security increases, the confidence of the population will be restored, accelerating the achievement of governance, economic, and social objectives. Marines in Helmand Province have helped open 86 schools, providing a "new normal" of daily classroom participation. Our efforts have contributed to the education of more than 121,000 children, including more than 28,000 female students, representing a 432% increase since 2005. Healthcare is another area of vast improvement. Over the last six years health clinics serving the needs of the Helmand population have increased from six to 57.

### Global Crisis Response

Marines remain vigilant around the globe, responding to crises spawned by instability, civil conflict, and humanitarian disaster. The Marine Corps provides six rotational MEUs and numerous special-purpose MAGTFs, each capable of responding when conditions deteriorate. For example, for more than 150 days during 2012, the 24th MEU remained on station, ready to protect American interests and provide decision space to our leaders in the wake of violent protests across the Middle East and North Africa.

Additionally, Marine Embassy Security detachments and Fleet Anti-terrorism Support Teams have protected our diplomatic missions against a range of threats. During 2012, these specialized Marine units deployed to reinforce U.S. diplomatic missions to provide physical security and force protection in Libya, Yemen, and elsewhere. Every day, Marine Security Guards are deployed at 148 embassies and consulates around the world.



### Humanitarian Assistance and Disaster Relief

In December 2012, Marines and Sailors from the 3rd Marine Expeditionary Brigade (MEB) responded quickly and effectively to a request from the Government of the Philippines to assist in humanitarian and disaster relief operations in the aftermath of Typhoon

Pablo. U.S. and Philippine armed forces worked shoulder-to-shoulder in order to ensure relief supplies reached those in need.



The flexibility and utility of amphibious forces operating from the sea was demonstrated on our own shores this past year. When Hurricane Sandy struck, more than 300 Marines and Sailors from the 26th MEU provided critical recovery and relief operations in support of Americans in need. Marine aviation conducted disaster relief assessments and provided the necessary airlift for Marines to deploy into the hardest-hit areas. On the ground, Marines successfully coordinated with local leaders and residents for priority relief requirements, providing critical supplies and assisting with clearing debris and helping restore normalcy to people's lives.

### Security Cooperation

Last year, Marines participated in more than 200 security cooperation engagements. Additionally, our forward-deployed rotational MEUs participated in joint and coalition exercises around the globe, from Morocco to Indonesia, strengthening our partnership and influence with numerous nations. Marines supported each geographic combatant command, providing crisis response and partnering with a wide range of partners and allies.

Thousands of Marines in Marine Special Operations Command participated in counter-terrorism, foreign internal defense, and other "spec-ops" in places around the globe. In support of U.S. Africa Command, Marines trained counter-terrorism forces in Mali and Mauritania supporting coalition forces combating al-Qaida affiliates across the Maghreb region of North Africa.



In Australia, our newly established presence continued to expand the training and partnership opportunities presented by one of our strongest and oldest allies in the Pacific. Marine Rotational Force Darwin trained on the ranges in Darwin then embarked aboard the USS *Germantown* to participate in a series of combined training and readiness exercises throughout Southeast Asia. Through the annual Landing Force Cooperation and Readiness Afloat Training, these Marines conducted valuable training with our partners in Thailand, Indonesia, and Malaysia. Returning to Darwin, these Marines conducted training with the Australians, furthering the development of this important and enduring partnership.



## MARINE CORPS MISSIONS

Marines offer an innovative portfolio of highly cost-effective means for crisis response and forward engagement. Our ability to respect territorial sovereignty without a large footprint ashore and scalability in times of crisis makes us an essential tool for national decision makers or joint commanders. By design, Marines smoothly integrate with the joint force, enable the interagency, and are a natural partner to special operations. Where U.S. citizens, allies or interests are threatened, maritime response capabilities provide rapid intervention options tailored to the demands of each crisis. When conflict escalates, our ability to “flex” and scale-up to the forcible-entry demands of a major contingency serves as a “rheostat” for the application of persuasive military power.

The rapid response and early intervention of Marine forces enables access for the rest of the joint force. Operating under austere conditions ashore, Marines can sustain themselves from the sea for long periods, without the need for immediate reinforcement through ports or airfields. The integrated firepower of Marine aviation, operating from amphibious ships or expeditionary basing ashore, allows Marine forces ashore to operate with a light footprint. Marines provide a



wedge for the joint force that buys time and space for the assembling and movement of larger and heavier elements necessary for sustained operations. When the joint force is formed, Marines can smoothly integrate into the larger Joint operation ashore or readily return to sea, where they can serve as an asymmetric maneuver element. This capability creates a “swing force” for subsequent conflict, or for addressing simultaneous crises that arise during major contingencies.

**Marines respond to today’s crisis, with today’s forces...TODAY.** A force able to swiftly intercede in crisis buys time for civilian and military decision-makers to assess and formulate a more deliberate response. Forward-deployed Marines provide an effective crisis-response capability throughout the range of military operations. Expeditionary forces can defend the territory of allies, seize key terrain, or threaten the global interests of an opponent. The inherent flexibility of these forces enables the United States to swiftly escalate or de-escalate conflict according to the aims of strategy and risk.

**Marines provide a stabilizing forward presence that deters conflict.** Forward presence builds trust that cannot be created suddenly, when conflict looms. As our Nation’s force in readiness, the Marine Corps bolsters national credibility and deterrence through persistent forward naval engagement. With dispersed expeditionary units afloat near likely crisis areas, and prepositioned equipment stationed forward aboard shipping, the Navy-Marine team is a visible and tangible reminder of our nation’s resolve.

**Marines build strong partners.** Marines build trust. Investment in building partner capacity is not “charity work,” but rather an investment in collective security throughout the global commons. Sea-based Marines tread lightly on host-nation infrastructure and sovereignty. Sized more closely to the security forces of most other nations, the Marine Corps provides a model of a tightly integrated air-ground-

logistics force, suitable to train effective security institutions across the globe.

**Marines assure access ashore.** Littoral power projection capabilities enable U.S. joint forces to push open the door of access ashore. This ability to go where the Nation is not “invited” fundamentally underwrites the deterrent value of the joint force, and provides decision-makers options that complement precision strike or nuclear capabilities. Modern amphibious operations seek to achieve precision maneuver that creates and exploits seams in forces that might oppose a landing. Uniquely, Marines can operate without the requirement for nearby land bases and can sustain themselves from the sea without intact and secured ports and airfields.

**Marines respond to natural disaster.** Crises imposed by unpredictable natural forces create human suffering on a scale that the U.S. cannot ignore. Timely U.S. responses strengthen the credibility of its promises, and increase the effectiveness of its security deterrence. The ability of amphibious forces to provide air, ground, and sea response, without imposing burdens on already stressed infrastructure, makes them a unique contributor to U.S. capability and influence.

**Marines are most ready when the nation is least ready.** Because our Nation cannot afford to hold the entire joint force at the highest state of readiness, it has chosen to keep the Marines ready. For over half a century, the Marine Corps has complied with the mandate of the 82d Congress to be “the most ready when the Nation is generally least ready.” There is no effective substitute for ready forces that can swiftly respond to crisis. There are no effective substitutes for United States Marines.

## RESPONDING TO AUSTERITY WITH VISION

As the Nation continues to recover economically, the Marine Corps is highly cognizant of the necessity for frugality and good stewardship of the nation’s resources. We have continued to adjust our organization, infrastructure and business practices to make the Marine Corps the best possible return for the defense dollar. Austerity may make us leaner but we will emerge stronger as we innovate and remain the most capable Marine Corps the nation can afford. *We may have to do with less, but we will refuse to do things less well.*

Readiness is the currency with which we meet the nation’s security obligations; a hollow force is not an option for the nation’s crisis response force. While readiness comes at a cost, the cost of not being able to intervene or contain crisis can be catastrophic. Investment in a ready Marine Corps buys decision space for leadership decision-making, and it buys time to assemble the components of the larger joint force if conditions require it. Preserving that ready edge for the joint force is fundamental to the capability we provide to the nation’s security.

**Maintain our Commitment to fulfillment of the mission in Afghanistan.** Our Afghanistan mis-



sion is not complete until the last Marine is home, our wounded warriors have healed, and the families of our fallen have been taken care of. As long as Marines are forward deployed in a combat theater, they will receive our first priority, the center of our thoughts and our last ounce of energy.

**Reset and Reconstitute the Force.** Our mission is not complete until our equipment is reset and our force is reconstituted. That equipment is central to our ability to respond to future missions. As stewards of the taxpayer, Marines have initiated heroic efforts to recover, refurbish, and repair equipment.

**Rebalance to the Pacific.** Rebalancing to the Pacific theater is a central element of our national strategy which builds on the decades-long presence of Marines who operate across its land, water and airspace every day. We will not just “be” in the Pacific, we will “be effective” in the Pacific through distributed, multi-mission-capable MAGTFs. We will preserve our global responsiveness, while developing opportunities in this priority theater.

**Advance Littoral Concepts.** The changing nature of the security threats to the Nation demands continued innovation. Operational Maneuver From The Sea and Ship-to-Objective Maneuver remain our capstone warfighting concepts, and we will continue to focus on



our ability to execute them while furthering the concept of Single Naval Battle to provide a seamless projection of naval power from blue-water to operations ashore. We must have the organizational and process discipline to manage our concepts through their full life cycle, providing focus and guidance for innovation, training, and experimentation.

**Invest in our Marines.** The superior qualities of the individual Marine provide our warfighting edge. That begins with recruiting and retaining the highest quality talent and applies to our active duty, reserve, and civilian workforces. Marines are expected to shoulder increasingly complex burdens in the emerging security environment we must adopt our educational establishments and training venues to ensure their readiness for the complexity of modern conflict.

**Invest in Innovation.** In addition to training and education, we will create mechanisms to embrace innovation across the force to move our concepts from theory to practice. We will leverage our human capital through experimentation and innovation at every level and create responsive mechanisms to reduce the “flash-to-bang” process of transforming innovative ideas to force implementation.

**Care for our Wounded Warriors.** After a decade of war, the continued physical, moral, and mental health of all of our Marines remains paramount. Those who bear the physical and mental wounds of war must remain our first concern. We will continue to extend every effort to heal our wounded, support their families, and help young Marines and Sailors increase their resilience.

**Keep Faith with Marines and their Families.** The faith of the American people has improved the quality of life for our Marines and families during the last decade and we must protect those gains in an era of increasing fiscal constraints. Our families share in our burdens, our values, and our risks, and their service





must be honored through quality programs and access to much-needed resources.

### THE NATION'S EXPEDITIONARY FORCE OF CHOICE

Marines have always responded to change in ways both timely and timeless. While our concepts, training, and equipment have adapted, our fundamental character has not. Marines remain physically strong, mentally agile, and imminently practical warfighters. The cohesion, fidelity, and expeditionary mindset of Marines are a proven recipe for success. Marines will continue to live hard, train hard, and fight hard, providing the Nation with a ready capability to contain the crisis, plug the gap, hold the line, fight and win.

*In short, America's Marines are a hedge against the unexpected and dangerous in a security environment that remains fraught with challenges.* A compelling security investment, the Marine Corps provides significant return on investment for every security dollar. When the Nation pays the “sticker price” for its Marines, it gets not only the least-expensive force in the U.S. defense arsenal, it also gets one that is highly skilled, forward deployed, and able to operate across the full range of military operations. Expeditionary naval forces provide an effective hedge against both the Nation's most likely and most dangerous security challenges. We do not know where or when we will fight, but we know that we will be ready when the bugle sounds. We do not know whom we will fight, but even the toughest adversaries have not proven our equal. We will remain America's “middleweight” expeditionary force in readiness . . . Semper Fidelis.

# CHAPTER 2



# ORGANIZATION

## INTRODUCTION

The Marine Corps is a crisis response expeditionary force which is task-organized and able to conduct operations across the entire spectrum of military operations. Fundamentally, the Corps is a “middleweight force” that fills the void in our Nation’s defense structure between light Special Operations Forces (SOF) and heavier conventional units. The Corps provides scalable and adaptive forces that complement the lighter and heavier forces.

During the last several years, the Marine Corps has grown in size to 202,100 Active Component Marines to meet the demands of global commitments and combat operations. The organization of the Corps has changed in order to adapt to the complex environment, even as it retained the flexibility and agility to respond to future needs. During this period of rapid growth, the Marine Corps has maintained balanced, combined-arms capabilities adapted to the new demands of regional conflicts, while developing agile and capable forces to meet future hybrid threats as well. The same will be true of the Marine Corps as it adjusts to post-Iraq and post-Afghanistan environments, which will include a capabilities-based force reduction to an end strength of 182,100 active duty Marines by fiscal year 2016.

Chapter 2 outlines the Marine Corps combined-arms structure and organization and highlights the unique capabilities that Marines bring to the fight.



## MARINE AIR-GROUND TASK FORCE (MAGTF)

The MAGTF is the Marine Corps principal organizational construct for conducting missions across the range of military operations. MAGTFs provide combatant commanders with scalable, versatile expeditionary forces able to assure allies, deter potential adversaries, provide persistent U.S. presence with little or no footprint ashore, and respond to a broad range of contingency, crisis, and conflict situations. They are balanced combined-arms force packages containing command, ground, aviation, and logistics elements. A single commander leads and coordinates this combined-arms team through all phases of deployment and employment. MAGTF teams live and train together, further increasing their cohesion and fighting power.

### MULTI-MISSION CAPABLE MAGTFs

Tailored to meet combatant commanders' requirements, MAGTFs operate as an integrated force in the air, land, maritime and cyberspace domains. The naval character of MAGTFs enhances their global mobility, lethality, and staying power.

Embarked aboard amphibious ships or deployed using other means, multi-mission capable MAGTFs provide U.S. civilian and military leaders with the ability to conduct the following activities:

- Move forces into crisis areas without revealing their exact destinations or intentions
- Provide continuous presence in international waters
- Commence execution of a mission within six to 48 hours of receiving a warning order
- Provide immediate national response in support of humanitarian and natural disaster relief operations
- Provide credible but non-provocative combat power over the horizon for rapid employment as the initial response to a crisis
- Support diplomatic processes for peaceful crisis resolution before employing immediate-response combat forces

- Respond to crises through the measured projection of combat power ashore — day or night and under all weather conditions
- Introduce additional Marine forces sequentially into a theater of operations
- Operate independent of established airfields, basing agreements, and overflight rights
- Conduct combat operations ashore, relying on MAGTF-organic combat service support
- Conduct theater security cooperation to build partner capacity
- Enable the introduction of follow-on forces by securing staging areas ashore or bypassing littoral defenses by going further inland
- Operate in rural and urban environments, and during chemical, biological, radiological, and nuclear situations
- Withdraw rapidly at the conclusion of operations
- Participate fully in the joint planning process and successfully integrate MAGTF operations with those of the joint force and enable larger joint operations
- Integrate with and complement the efforts of SOF
- Support service, joint, and national efforts to maintain freedom of action in cyberspace

### MAGTF COMPOSITION

The Marine Corps task organizes for combat in accordance with its statutory mandate to provide forces of combined arms, including aviation, by forming integrated combined-arms MAGTFs. As the name indicates, MAGTFs are organized for the specific tasks at hand and specifically tailored by mission for rapid deployment by air and/or sea. No matter what their mission or mode of deployment, MAGTFs are comprised of four deployable elements that are supported from Marine Corps bases and stations.

### Command Element (CE)

The CE contains the MAGTF headquarters and other units that provide operations, intelligence, logistics, communications, and administrative support. As with all other elements of the MAGTF, the CE is scalable and task organized to provide the Command, Control, Communications, Computers, Intelligence, and joint interoperability necessary for effective planning and execution of operations.

### Ground Combat Element (GCE)

The GCE is task organized to conduct ground operations to support the MAGTF mission. This element includes infantry, artillery, reconnaissance, armor, light armor, assault amphibian, engineer, and other forces as needed. The GCE can vary in size and composition. Its makeup can range from a light, air-transportable reinforced company to a relatively heavy, mechanized unit that includes one or more Marine divisions, or any other type of Marine Corps ground combat unit that meets the demands of a particular mission.

### Aviation Combat Element (ACE)

The ACE conducts offensive, defensive, and all other air operations to support the MAGTF mission. The ACE is task-organized to perform the six functions of Marine aviation required to support the MAGTF mission — assault support, anti-air warfare, offensive air support, electronic warfare, control of aircraft and missiles, and aerial reconnaissance — which could include aviation support to humanitarian assistance and disaster relief operations. The ACE is formed around an aviation headquarters with appropriate air control agencies, combat, combat-support, and combat-service support units. The ACE can vary in size and composition from an aviation detachment of specifically required aircraft to one or more Marine aircraft wings consisting of multiple fixed and rotary-wing aircraft of several types and capabilities.

### Logistics Combat Element (LCE)

The LCE is task organized to provide the full range of combat logistics functions and capabilities necessary to maintain the continued readiness and sustainability of the MAGTF as a whole. It is formed around a combat logistics headquarters and may vary in size and composition from a support detachment to one or more Marine Logistics Groups (MLG).

### TYPES OF MAGTFs

There are four types of MAGTFs: the Marine Expeditionary Force (MEF); the Marine Expeditionary Brigade (MEB); the Marine Expeditionary Unit (MEU); and the Special Purpose MAGTF.

#### Marine Expeditionary Force

The MEF is the principal Marine Corps warfighting organization during larger crises or contingencies. Normally commanded by a Lieutenant General, a MEF can range in size from one division and aircraft wing to multiple divisions and aircraft wings, together with one or more logistics groups. MEFs are capable of amphibious operations and sustained operations ashore in any geographic environment. With appropriate augmentation, the MEF CE is capable of performing as a Joint Task Force (JTF) headquarters. MEFs often deploy in echelon and designate the lead element as the MEF (Forward).

MEFs are the primary “standing MAGTFs” in peacetime and wartime. The Marine Corps is organized with three standing MEFs, each with a Marine division, aircraft wing, and logistics group. The I Marine Expeditionary Force (I MEF) is located at bases in California and Arizona. The II Marine Expeditionary Force (II MEF) is located at bases in North Carolina and South Carolina. And the III Marine Expeditionary Force (III MEF) is located at bases in Okinawa, mainland Japan, and Hawaii, with future plans for bases in Guam and Australia.

### Marine Expeditionary Brigade

The MEB is the mid-sized MAGTF that can include up to 20,000 Marines and is normally commanded by a Brigadier General. The MEB is scalable, capable of full spectrum operations, and self-sustaining for 30 days. Three standing MEB command elements will be activated by the end of FY 2013. The standing MEB command elements do not have permanently assigned forces, but maintain habitual relationships with associated major subordinate elements through planning and exercises. When mobilized, the MEB is comprised of a reinforced infantry regiment, a composite Marine Aircraft Group, and a Combat Logistics Regiment.

MEBs provide combatant commanders with scalable warfighting capability across the range of military operations and can conduct amphibious assaults and operations ashore in any geographic environment. As an expeditionary force, it is capable of rapid deployment and employment via amphibious shipping (normally 17 amphibious ships), strategic air and sealift, geographic or maritime pre-positioning force assets, or any combination of these. A MEB can operate independently, serve as the forward echelon of a MEF or act as a JTF headquarters with augmentation.

Concept Development & Integration Department is conducting a detailed assessment of future MEB structure requirements. Results of this effort will be published in 2013, and will provide a thorough guide for the future size, composition, and capabilities of this type of MAGTF.

### Marine Expeditionary Unit

Forward-deployed MEUs embarked aboard ARGs operate continuously in the areas of responsibility of various geographic combatant commanders. These units provide the President and the geographic combatant commanders a forward-deployed, flexible sea-based MAGTF, capable of conducting amphibious operations to respond to crisis, conduct limited contingency operations, introduce follow-on forces, and support designated special operations forces. In effect, they provide



an afloat “on-station” force capable of responding to any situation that may arise. MEUs are characterized by their sea-based forward presence, expeditionary nature, ability to plan for and respond to crises, combined arms integration, and their interoperability with joint, combined and special operations forces. Composition of the MEU is informed by Marine Corps Order 3120.9C, Policy for Marine Expeditionary Units.

The MEU is commanded by a Colonel and deploys with 15 days of accompanying supplies. Prior to deployment, a MEU undergoes an intensive six-month training program, focusing on its Mission Essential Task List and interoperability with Joint and Special Operations Forces. The training culminates with a thorough evaluation and certification as “Operationally Ready to Deploy.” The organic capabilities of the MEU are as follows:

- Amphibious operations
  - Amphibious assault
  - Amphibious raid
  - Small boat raid (specific to 31st MEU)
  - Maritime interception operations
  - Advance force operations
- Expeditionary support to other operations/crisis response and limited-contingency operations
  - Noncombatant evacuation operations
  - Humanitarian assistance
  - Stability operations
  - Tactical recovery of aircraft and personnel
  - Joint and combined operations



- Aviation operations from expeditionary sites
- Theater security cooperation activities
- Airfield and port seizures
- Theater security cooperation operations to build the capacity of partner nations and increase interoperability.

Prior to deployment, the MEF commander exercises full command of his organic MEU. Once embarked, MEU command relationships are delineated by the Geographic Combatant Commander (GCC) and are normally assigned operational control (OPCON) to the naval service component. However, during crisis response and contingency operations GCCs may shift OPCON of the MEU as articulated in Joint Publication (JP) 3-02, *Amphibious Operations*:

While the full range of command relationship options as outlined in JP 1, *Doctrine for the Armed Forces of the United States*, are available, in amphibious operations, service component commanders normally retain operational control (OPCON) of their respective forces. If the Joint Force Commander organizes along functional lines, functional component commanders will normally exercise OPCON over all their parent Services' forces and tactical control (TACON) over other Services' forces attached or made available for tasking.

### Special Purpose MAGTF (SPMAGTF)

A SPMAGTF is task organized to accomplish a specific mission, operation, or regionally focused exercise. They can be organized, trained, and equipped with Marine forces to conduct a wide variety of expeditionary operations ranging from peacetime missions, to training exercises, and responses to contingencies and crises. SPMAGTFs can support theater campaign plans, security cooperation, and civil-military operations requirements.

SPMAGTFs have capabilities, mobility, and sustainability commensurate with mission requirements in order to increase interoperability with, and pro-

vide training to, less developed military forces. The SPMAGTF can be tasked with building partner nation security capacity and supporting partner nation security efforts in specific regional areas. The SPMAGTF provides the combatant commander with a flexible expeditionary force employment option that further augments the traditional capabilities provided by the Marine Corps. SPMAGTFs are normally designated by the service headquarters in response to combatant commander requirements.

The Nation's MAGTFs thus provide a continuum of capabilities to support naval, combatant commander, and national requirements. These MAGTFs joined by special-purpose forces and unique Marine forces enable the Corps to address the full range of conventional, unconventional, and irregular/hybrid threats as well as other taskings as the President might require.

### UNIQUE COMBATANT COMMANDER SUPPORT

A combatant commander or subordinate joint force commander might also require Marine forces that do not have all elements of a MAGTF. These forces are not given a specific MAGTF designation. Examples include the Black Sea Rotational Force (BSRF) and Marine Rotational Force-Darwin, which participate in security cooperation to build military capacity, provide regional stability, and develop lasting partnerships with nations in the region.

In addition, as the Marine Corps evaluates potential hybrid threats, we believe there likely will be a requirement for smaller combined-arms task forces. These task forces will operate in an environment where greater capabilities are pushed to lower levels, thus enabling distributed operations at increasing distances. These task forces will depend upon increased tactical mobility and must maintain a high state of readiness. At the same time, they must retain the capability to integrate quickly into a larger, more lethal force on short notice.

The Marine Corps ethos, training and warfighting philosophy makes Marines ideally suited to these types

of units and operations. However, we must ensure that our organizational designs, as well as planning and command and control capabilities, preserve the operational agility required to answer the demands of the complex future operating environment, and consistently fulfill the needs of our combatant commanders.

### MAGTF SUSTAINABILITY

A fundamental characteristic of a MAGTF is its ability to operate for extended periods as an expeditionary force, relying on its integral combat logistics element and internal resources for sustainment. All MAGTFs have inherent sustainability that allows them to be self-sufficient for planned periods. Larger MAGTFs have a deeper, broader, and more capable organic support capability. Different size MAGTFs deploy with sufficient accompanying supplies to support joint operations. MAGTFs can augment their organic sustainability by using external support from Navy organizations, host-nation support agreements, interservice support agreements, and in-theater cross-service agreements.

### MARITIME PREPOSITIONING FORCE (MPF)

The MPF is a strategic power-projection capability that combines the lift capacity, flexibility, and responsiveness of surface ships with the speed of strategic airlift. Strategically forward deployed around the globe, the maritime prepositioning ships (MPS) of the MPF provide geographic combatant commanders with persistent forward presence and rapid crisis response by prepositioning the combat equipment and supplies to support up to two MEBs for 30 days.

The MPF is organized into two Maritime Prepositioning Ship Squadrons (MPSRON) with 12 ships overall. By 2015, there will be 14 ships. MPSRON-2 is based at Diego Garcia in the Indian Ocean, and MPSRON-3 is based in the Guam-Saipan area of the western Pacific Ocean.

These interoperable MPSROns are each designed to “marry-up” with a fly-in echelon to support the

rapid closure of a MEB. The MPF can also support smaller or larger MAGTFs by employing as few as one or as many as 12 MPF ships. The MPF consists of government-owned ships operated by Military Sealift Command (MSC). When needed, these ships move to a crisis region and offload either in port or offshore via in-stream offload. Offloaded equipment and supplies are then “married up” with Marines arriving at nearby airfields. The end result is a combat-ready MAGTF rapidly established ashore, using minimal in-country reception facilities. The MAGTF combat capability provided by MPF is capable of supporting geographic combatant commander military operations across the range of military operations.

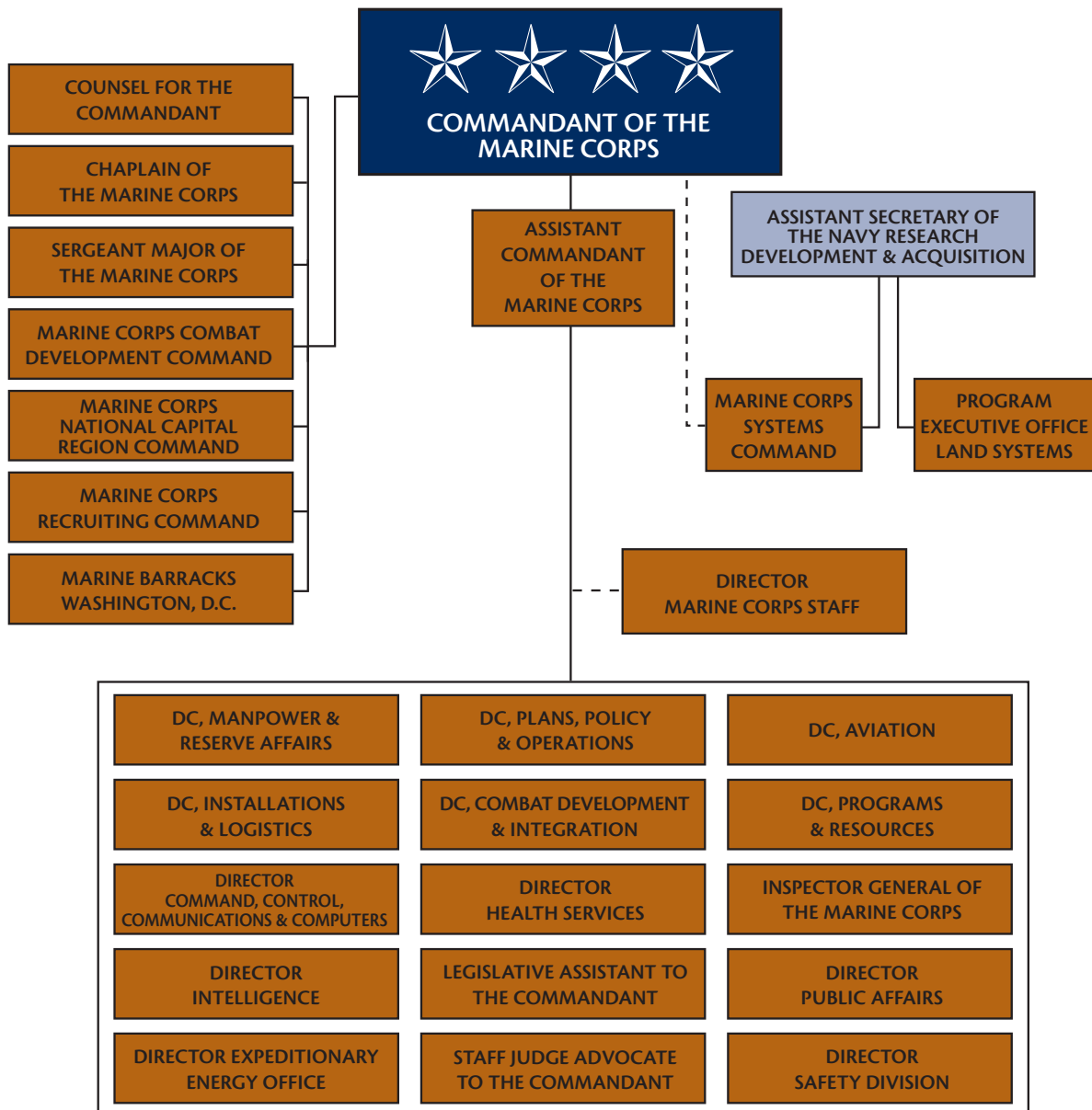
### MARINE CORPS PREPOSITIONING PROGRAM—NORWAY (MCPN)

MCPN enhances the operational responsiveness of all geographic combatant commanders by providing mission-tailored, prepositioned support to Marine Corps expeditionary operations globally. The existing equipment set is being reshaped, with the addition of communications and ordnance assets, to support a MAGTF built around an infantry battalion task force and composite aviation squadron. Quantities of equipment and supplies currently stored in Norway will also be adjusted to provide a balanced equipment set appropriate to support the new force list. MCPN will retain its primary role of augmenting up to a MEB-sized force to support the reinforcement of Norway and U.S. Marine Corps expeditionary operations. MCPN materiel is stored in six caves and two airfields spread across Norway and is available for rapid preparation and marshaling at aerial, sea, or rail ports of debarkation in support of deploying MAGTFs. This forward prepositioning reduces reaction time and eliminates the need to otherwise deploy this equipment from locations in the continental United States, with all the attendant burdens on strategic lift that this would entail.

## HEADQUARTERS, U.S. MARINE CORPS (HQMC)

Headquarters, U.S. Marine Corps (HQMC) consists of the Commandant of the Marine Corps (CMC) and those staff agencies that advise and assist him in discharging his responsibilities prescribed by law. The Commandant is directly responsible to the Secretary of the Navy for the overall performance of the Marine

Corps. This includes the administration, discipline, internal organization, training, requirements, efficiency, and readiness of the service. Also, as the Commandant is a member of the Joint Chiefs of Staff, HQMC supports him in his interaction with the Joint Staff. The Commandant also is responsible for the operation of the Marine Corps material support system.





## OPERATING FORCES

Operating forces — the heart of the Marine Corps — provide the forward presence, crisis response, and combat power that the Corps makes available to combatant commanders. The Marine Corps has established three, permanent commands to provide forces to unified combatant commanders:

- U.S. Marine Corps Forces Command (MARFORCOM)
- U.S. Marine Corps Forces, Pacific (MARFORPAC)
- U.S. Marine Corps Forces, Special Operations Command (MARFORSOC).

Control of MARFORCOM is retained by the Marine Corps. The II Marine Expeditionary Force (II MEF), and other unique capabilities maintained under the Commander, MARFORCOM, are made available, by the Commandant of the Marine Corps, via the Joint Chiefs of Staff global force management allocation process. The Commander, MARFORPAC is assigned to the Commander, U.S. Pacific Command (PACOM), and provides I MEF and III MEF to PACOM. The Commander, MARFORSOC is assigned to the Commander, Special Operations Command (SOCOM) and provides assigned forces to SOCOM.

These assignments reflect the peacetime disposition of Marine Corps forces. Marine forces are apportioned to the remaining geographic and functional combatant commands — the U.S. Southern Command (SOUTHCOM), U.S. Northern Command (NORTHCOM), U.S. European Command (EUCOM), U.S. Central Command (CENTCOM), U.S. Africa Command (AFRICOM), U.S. Strategic Command (STRATCOM), U.S. Cyber Command (CYBERCOM), and U.S. Forces Korea (USFK) — for contingency planning, and are provided to these commands when directed by the Secretary of Defense.

The following sections highlight some of these organizations and several of the other unique organizations in the operating forces.

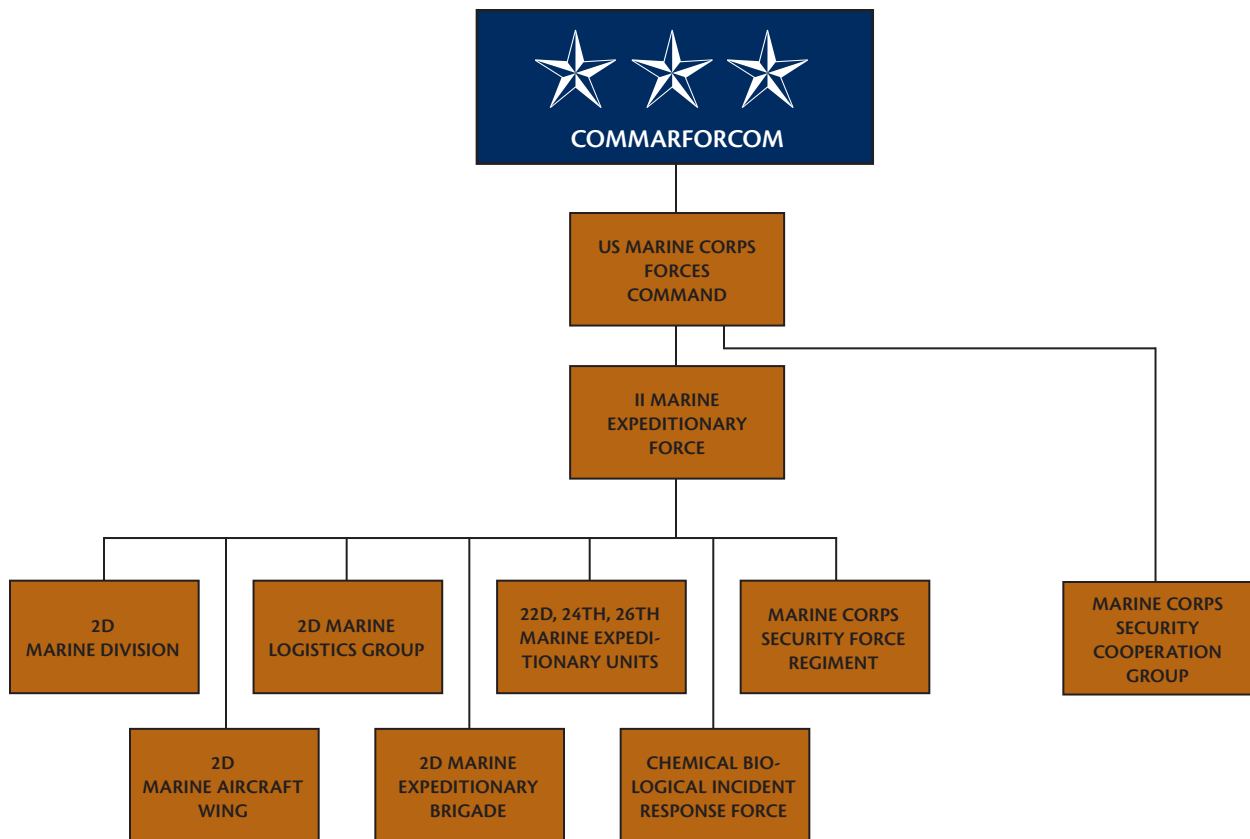
## MARINE CORPS FORCES COMMAND (MARFORCOM)

Located in Norfolk, Virginia, the Commander, MARFORCOM is tasked with the following activities:

- Commanding Active Component (AC), Marine Corps-retained operating forces
- Executing force sourcing and synchronization to provide joint commanders with the Marine Corps forces they require
- Directing deployment planning and the execution of Marine Corps-retained operating forces in support of combatant commander and service requirements
- Serving as Commanding General, Fleet Marine Forces Atlantic (CG FMFLANT) and commanding embarked Marine Corps forces
- Coordinating Marine Corps-Navy integration of operational initiatives and advising the Commander, U.S. Fleet Forces Command (USFF) on Navy support to Marine Corps forces assigned to naval ships, bases, and installations
- Serving as Commander, Marine Forces Europe
- Serving as Commander, Marine Corps Bases Atlantic
- Conducting service-directed operational tasks as required.

Within the past year, Marine Corps Installations Command (MCICOM) has reached full operational capability (FOC). The 24 active installations and 11 airfields are divided into three regions: Marine Corps Installations Pacific (MCIPAC), Marine Corps Installations East (MCIEAST), and Marine Corps Installations West (MCIWEST). The 30,000 active forces assigned to MCICOM provide timely support to the Marines, Sailors, and families from the operating forces and maintenance depots.

## U.S. MARINE CORPS FORCES COMMAND



## U.S. MARINE CORPS FORCES COMMAND UNITS

### II Marine Expeditionary Force

#### II MARINE EXPEDITIONARY FORCE

##### MARINE CORP BASE, CAMP LEJEUNE, NC

- II Marine Expeditionary Force Headquarters Group
  - 8th Communications Battalion
  - 2d Intelligence Battalion
  - 2d Radio Battalion
  - 2d Air and Naval Gunfire Liaison Company
  - 2d Law Enforcement Battalion
- 2d Marine Expeditionary Brigade
  - 2d Marine Expeditionary Brigade Command Element
- 22d Marine Expeditionary Unit
- 24th Marine Expeditionary Unit
- 26th Marine Expeditionary Unit
- Marine Corps Security Force Regiment Yorktown, VA
- Chemical Biological Incident Response Force Indian Head, MD
- 2D MARINE DIVISION
  - MCB CAMP LEJEUNE, NC
  - Headquarters Battalion
  - 2d Marine Regiment
    - 1st Battalion
    - 2d Battalion
    - 3d Battalion
    - 3d Battalion, 9th Marines
  - 6th Marine Regiment
    - 1st Battalion
    - 2d Battalion
    - 3d Battalion
    - 2d Battalion, 9th Marines
  - 8th Marine Regiment
    - 1st Battalion
    - 2d Battalion
    - 3d Battalion
    - 1st Battalion, 9th Marines
  - 10th Marine Regiment
    - 1st Battalion
    - 2d Battalion
    - 3d Battalion

- 2d Tank Battalion
- 2d Assault Amphibian Battalion
- 2d Light Armored Reconnaissance Battalion
- 2d Combat Engineer Battalion
- 2d Reconnaissance Battalion
- 2D MARINE AIRCRAFT WING MARINE CORPS AIR STATION,  
CHERRY POINT, NC
- Marine Wing Headquarters Squadron 2
- Marine Aircraft Group 14
  - Marine Aviation Logistics Squadron 14
  - Marine Tactical Electronic Warfare Squadron 1
  - Marine Tactical Electronic Warfare Squadron 2
  - Marine Tactical Electronic Warfare Squadron 3
  - Marine Tactical Electronic Warfare Squadron 4
  - Marine Attack Squadron 223
  - Marine Attack Squadron 231
  - Marine Attack Squadron 542
  - Marine Attack Training Squadron 203
  - Marine Aerial Refueler Transport Squadron 252
  - Marine Wing Support Squadron 271
- Marine Aircraft Group 26
  - MCAS New River, NC
  - Marine Aviation Logistics Squadron 26
  - Marine Medium Tiltrotor Squadron 162
  - Marine Medium Tiltrotor Squadron 261
  - Marine Medium Tiltrotor Squadron 263
  - Marine Medium Tiltrotor Squadron 264
  - Marine Medium Tiltrotor Squadron 266
  - Marine Medium Tiltrotor Squadron 365
  - Marine Medium Tiltrotor Training Squadron 204
  - Marine Wing Support Squadron 272
- Marine Aircraft Group 29
  - MCAS New River, NC
  - Marine Aviation Logistics Squadron 29
  - Marine Light Attack Helicopter Squadron 167
  - Marine Light Attack Helicopter Squadron 269
  - Marine Light Attack Helicopter Squadron 467
  - MCAS Cherry Point, NC



## U.S. MARINE CORPS FORCES COMMAND UNITS

## II Marine Expeditionary Force (cont.)

Marine Heavy Helicopter Squadron 366  
 MCAS Cherry Point, NC

Marine Heavy Helicopter Squadron 461

Marine Heavy Helicopter Squadron 464

Marine Heavy Helicopter Training Squadron 302

Marine Wing Support Squadron 274

Marine Aircraft Group 31  
 MCAS Beaufort, SC

Marine Aviation Logistics Squadron 31

Marine Fighter Attack Squadron 115

Marine Fighter Attack Squadron 122

Marine Fighter Attack Squadron 251

Marine Fighter Attack Squadron 312

Marine All Weather Fighter Attack Squadron 224

Marine All Weather Fighter Attack Squadron 533

Marine Fighter Attack Training Squadron 501  
 (Eglin Air Force Base, FL)

Marine Wing Support Squadron 273

Marine Air Control Group 28

Marine Tactical Air Command Squadron 28

Marine Air Control Squadron 2

Marine Air Support Squadron 1

Marine Wing Communications Squadron 28

2d Low Altitude Air Defense Battalion

Marine Unmanned Aerial Vehicle Squadron 2

2D MARINE LOGISTICS GROUP  
 MCB CAMP LEJEUNE, NC

HQBN, 2D MLG

MEU Logistics Battalion 22

MEU Logistics Battalion 24

MEU Logistics Battalion 26

Combat Logistics Regiment 2

Combat Logistics Battalion 2

Combat Logistics Battalion 6

Combat Logistics Battalion 8

Combat Logistics Regiment 25

2d Maintenance Battalion

2d Medical Battalion

2d Supply Battalion

Combat Logistics Company 21  
 MCAS Cherry Point, NC

Combat Logistics Company 23  
 MCAS Beaufort, SC

8th Engineer Support Battalion

2d Dental Battalion

### U.S. MARINE CORPS FORCES, PACIFIC (MARFORPAC)

MARFORPAC has three command roles and responsibilities. The command serves as U.S. Marine Corps component to U.S. Pacific Command (USPACOM), U.S. Marine Corps component to U.S. Forces Korea (USFK), and Fleet Marine Forces Commander to Pacific Fleet. In addition to its service component responsibilities, MARFORPAC could be tasked to act as a joint task force command element.

With its headquarters located aboard Camp H. M. Smith, HI, MARFORPAC is the largest field command in the Marine Corps, having control of two-thirds of Marine Corps operational forces. Commander, MARFORPAC commands all U.S. Marine Corps forces assigned to USPACOM — approximately 86,400 Marines, Sailors and Civilians — operating in a diverse geographic area stretching from Yuma, Arizona to Goa, India.

The Commander, MARFORPAC supports national and theater strategic objectives, and exercises Marine Corps component responsibilities in support of operational and concept plans, theater security cooperation, foreign humanitarian assistance, homeland defense, force posture, and lay down. This includes a planned rotational presence in northwestern Australia, and protection of installations and forces in the USPACOM area of responsibility (AOR).

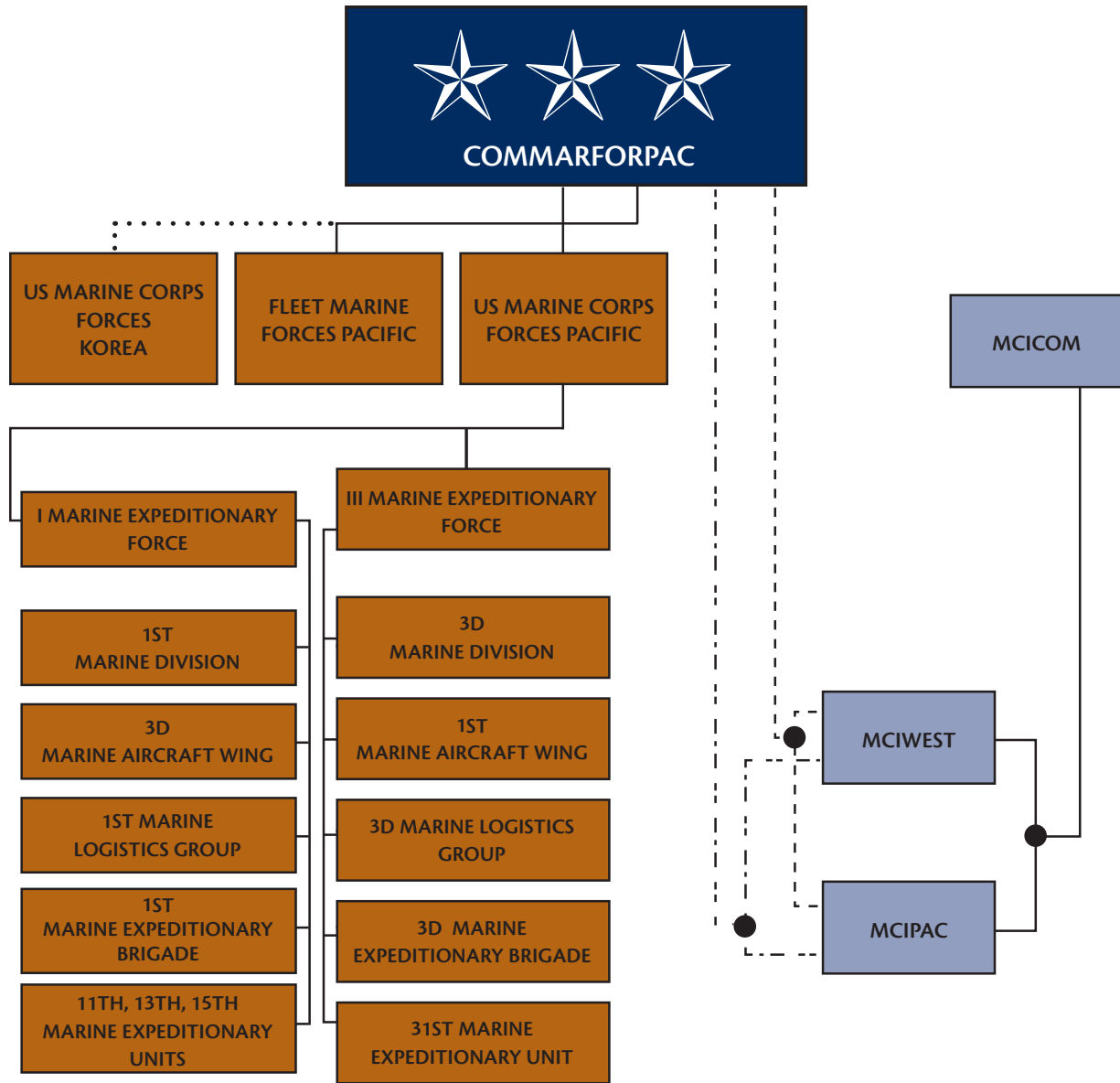
Annually, MARFORPAC conducts more than 160 major multi-lateral and bi-lateral exercises and theater security cooperation engagements with some 30 allies and partners in the Asia-Pacific region. MARFORPAC forces also rapidly respond to a yearly average of 14 humanitarian-assistance and disaster-relief (HA/DR) operations.

Through unity of effort, MARFORPAC exercises coordinating authority in a consultative relationship with MCICOM for operational force base support requirements, Defense Policy Review Initiative (DPRI) requirements in Japan and Guam, USPACOM Unified Campaign Plan (UCP) and contingency planning requirements, and other installation-support initiatives affecting the Marine Corps in the PACOM AOR.

While Marine Corps Installations Command exercises command and administrative control over all bases and stations of the Marine Corps, two of MCICOM's regional commands, MCIWEST and MCIPAC, have USPACOM-assigned forces as tenants. As such, COMMARFORPAC exercises tactical control of MCIPAC and MCIWEST, or both, when supporting USPACOM (UCP) tasking and operational missions.

During exceptional circumstances that require U.S. response in the PACOM AOR, such as HA/DR, or major combat operations, COMMARFORPAC, in consultation and accord with COMMCICOM, may assume operational control of MCIPAC and MCIWEST and their assigned installations.

U.S. MARINE CORPS FORCES, PACIFIC



LEGEND	
.....	MARFORPAC retains ADCON over MARFORK during Armistice.
-----	MARFORPAC exercises Coordinating Authority in a consultative relationship with MCICOM over operational force base requirements and installation support initiatives.
- - - - -	MARFORPAC retains TACON of MCIPAC and MCIWEST when supporting CDR, USPACOM UCP tasking, as well as OPCON during exceptional circumstances such as crisis/contingency response, depending on CDRUSPACOM requirements.

## U.S. MARINE CORPS FORCES PACIFIC UNITS

### I Marine Expeditionary Force

**I MARINE EXPEDITIONARY FORCE**  
**MARINE CORPS BASE, CAMP PENDLETON, CA**

- I Marine Expeditionary Force Headquarters Group
  - 9th Communications Battalion
  - 1st Intelligence Battalion
  - 1st Radio Battalion
  - 1st Air and Naval Gunfire Liaison Company
  - 1st Law Enforcement Battalion
- 1st Marine Expeditionary Brigade
  - 11th Marine Expeditionary Unit
  - 13th Marine Expeditionary Unit
  - 15th Marine Expeditionary Unit

**1ST MARINE DIVISION**  
**MCB CAMP PENDLETON, CA**

- Headquarters Battalion
- 1st Marine Regiment
  - 1st Battalion
  - 2d Battalion
  - 3d Battalion
  - 1st Battalion, 4th Marines
- 5th Marine Regiment
  - 1st Battalion
  - 2d Battalion
  - 3d Battalion
  - 2d Battalion, 4th Marines
- 7th Marine Regiment
  - Marine Corps Air Ground Combat Center, 29 Palms, CA
    - 1st Battalion
    - 2d Battalion
    - 3d Battalion
    - 3d Battalion, 4th Marines
- 11th Marine Regiment
  - 1st Battalion
  - 2d Battalion
  - 3d Battalion MCAGCC, 29 Palms, CA
  - 5th Battalion (HIMARS)
- 1st Tank Battalion
  - MCAGCC, 29 Palms, CA

- 3d Assault Amphibian Battalion Company D
  - MCAGCC, 29 Palms, CA
- 1st Light Armored Reconnaissance Battalion
- 3d Light Armored Reconnaissance Battalion
  - MCAGCC, 29 Palms, CA
- 1st Combat Engineer Battalion
- 3d Combat Engineer Battalion
  - MCAGCC, 29 Palms, CA
- 1st Reconnaissance Battalion

**3D MARINE AIRCRAFT WING**  
**MARINE CORPS AIR STATION, MIRAMAR, CA**  
 Marine Wing Headquarters Squadron 3

- Marine Aircraft Group 11
  - Marine Aviation Logistics Squadron 11
  - Marine Fighter Attack Squadron 232
  - Marine Fighter Attack Squadron 314
  - Marine Fighter Attack Squadron 323
  - Marine All Weather Fighter Attack Squadron 121
  - Marine All Weather Fighter Attack Squadron 225
  - Marine Aerial Refueler Transport Squadron 352
  - Marine Fighter Attack Training Squadron 101
  - Marine Wing Support Squadron 373

- Marine Aircraft Group 13
  - MCAS Yuma, AZ
    - Marine Aviation Logistics Squadron 13
    - Marine Attack Squadron 211
    - Marine Attack Squadron 214
    - Marine Attack Squadron 311
    - Marine Attack Squadron 513
    - Marine Wing Support Squadron 371

- Marine Aircraft Group 16
  - Marine Aviation Logistics Squadron 16
  - Marine Medium Tiltrotor Squadron 161
  - Marine Medium Tiltrotor Squadron 163
  - Marine Medium Helicopter Squadron 165
  - Marine Medium Tiltrotor Squadron 166
  - Marine Medium Tiltrotor Squadron 363
  - Marine Heavy Helicopter Squadron 361
  - Marine Heavy Helicopter Squadron 462
  - Marine Heavy Helicopter Squadron 465



## U.S. MARINE CORPS FORCES PACIFIC UNITS

## I Marine Expeditionary Force (cont.)

Marine Heavy Helicopter Squadron 466  
 Marine Wing Support Squadron 374  
 MCAGCC 29 Palms, CA

Marine Aircraft Group 39  
 MCAS Camp Pendleton, CA

Marine Aviation Logistics Squadron 39  
 Marine Light Attack Helicopter Squadron 169  
 Marine Light Attack Helicopter Squadron 267  
 Marine Light Attack Helicopter Squadron 369  
 Marine Light Attack Helicopter Squadron 469  
 Marine Light Attack Helicopter Training  
 Squadron 303  
 Marine Medium Helicopter Squadron 268  
 Marine Medium Helicopter Squadron 364  
 Marine Medium Helicopter Training Squadron 164  
 Marine Wing Support Squadron 372

Marine Air Control Group 38

Marine Tactical Air Command Squadron 38  
 Marine Air Control Squadron 1  
 MCAS Yuma, AZ  
 Marine Air Support Squadron 3  
 MCAS Camp Pendleton, CA  
 Marine Wing Communications Squadron 38  
 3d Low Altitude Air Defense Battalion  
 MCAS Camp Pendleton, CA  
 Marine Unmanned Aerial Vehicle Squadron 1  
 MCAGCC 29 Palms, CA  
 Marine Unmanned Aerial Vehicle Squadron 3  
 MCAGCC 29 Palms, CA

1ST MARINE LOGISTICS GROUP  
 MCB CAMP PENDLETON, CA

Combat Logistics Regiment 1

Combat Logistics Battalion 1  
 Combat Logistics Battalion 5  
 Combat Logistics Battalion 7  
 MCAGCC 29 Palms, CA

Combat Logistics Regiment 15

1st Maintenance Battalion  
 1st Medical Battalion  
 1st Supply Battalion  
 Combat Logistics Company 11  
 MCAS Miramar, CA  
 Combat Logistics Company 16  
 MCAS Yuma, AZ

Combat Logistics Regiment 17

MEU Logistics Battalion 11  
 MEU Logistics Battalion 13  
 MEU Logistics Battalion 15

7th Engineer Support Battalion

1st Dental Battalion

## U.S. MARINE CORPS FORCES PACIFIC UNITS

### III Marine Expeditionary Force

#### III MARINE EXPEDITIONARY FORCE MARINE CORPS BASES, OKINAWA, JAPAN

##### III Marine Expeditionary Force Headquarters Group

- 7th Communications Battalion
- 3d Intelligence Battalion
- 3d Radio Battalion MCB Kaneohe Bay, HI
- 5th Air and Naval Gunfire Liaison Company
- 3d Law Enforcement Battalion
- 3d Marine Expeditionary Brigade
- 3d Marine Expeditionary Brigade  
Command Element
- 31st Marine Expeditionary Unit

#### 3D MARINE DIVISION MARINE CORPS BASES, OKINAWA, JAPAN

##### Headquarters Battalion

- 3d Marine Regiment MCB Kaneohe Bay, HI
  - 1st Battalion
  - 2d Battalion
  - 3d Battalion
- 4th Marine Regiment
  - Units sourced via Unit Deployment Program(UDP)
- 12th Marine Regiment
  - 1st Battalion MCB Kaneohe Bay, HI
  - 3d Battalion
- 3d Combat Assault Battalion
- 3d Reconnaissance Battalion

#### 1ST MARINE AIRCRAFT WING MARINE CORPS BASES, OKINAWA, JAPAN

##### Marine Wing Headquarters Squadron 1

- Marine Aircraft Group 12  
MCAS Iwakuni, Japan
  - Marine Aviation Logistics Squadron 12
  - Marine All Weather Fighter Attack Squadron 242
  - Marine Wing Support Squadron 171  
MCAS Iwakuni, Japan

##### Marine Aircraft Group 24 (-) MCAS Kaneohe Bay, HI

- Marine Aviation Logistics Squadron 24 (-)
- Marine Light Attack Helicopter Squadron 367
- Marine Heavy Helicopter Squadron 362
- Marine Heavy Helicopter Squadron 463 (CH-53E)
- Marine Wing Support Detachment 24

- Marine Aircraft Group 36  
MCAS Futenma, Okinawa, Japan
  - Marine Aviation Logistics Squadron 36
  - Marine Medium Helicopter Squadron 262
  - Marine Medium Tiltrotor Squadron 265
  - Marine Aerial Refueler Transport Squadron 152
  - Marine Wing Support Squadron 172

- Marine Air Control Group 18  
MCAS Futenma, Okinawa, Japan
  - Marine Tactical Air Command Squadron 18
  - Marine Air Control Squadron 4
  - Marine Air Support Squadron 2
  - Marine Wing Communications Squadron 18

#### 3D MARINE LOGISTICS GROUP MARINE CORPS BASES, OKINAWA, JAPAN

##### Combat Logistics Regiment 3

- Combat Logistics Battalion 3  
MCB Kaneohe Bay, HI
- Combat Logistics Battalion 4

##### Combat Logistics Regiment 35

- 3d Maintenance Battalion
- 3d Medical Battalion
- 3d Supply Battalion
- Combat Logistics Company 36  
MCAS Iwakuni, Japan

##### Combat Logistics Regiment 37

- MEU Logistics Battalion 31

##### 9th Engineer Support Battalion

##### 3d Dental Battalion

### U.S. MARINE CORPS FORCES, SPECIAL OPERATIONS COMMAND (MARSOC)

In October 2005, the Secretary of Defense directed the Marine Corps to form a service component of U.S. Special Operations Command (USSOCOM) and begin providing forces to the commander of USSOCOM. MARSOC was formally established February 24, 2006 and is the Marine Corps component of USSOCOM. Headquartered at Camp Lejeune, NC, MARSOC trains, organizes, equips, and, when directed by the Commander USSOCOM, deploys task organized, scalable and responsive Marine Corps special operations forces (SOF) worldwide in support of combatant commanders and other agencies.

MARSOC will ultimately grow to a total force of approximately 4,000 Marines, Sailors, and civilian employees, including smaller numbers of the other branches of service. MARSOC includes three subordinate commands: the Marine Special Operations Regiment (MSOR), which consists of three Marine special operations battalions (1st MSOB at Camp Pendleton, CA, and 2d and 3d MSOB at Camp Lejeune, NC); the Marine Special Operations Support Group (MSOSG), which consists of three battalions (Marine Special Operations Combat Support Battalion and Marine Special Operations Logistics Battalion at Camp Lejeune, NC and Marine Special Operations Support Battalion at Camp Pendleton, CA.); and the Marine Special Operations School (MSOS) at Camp Lejeune, NC.

A Marine Corps major general commands MARSOC with a supporting staff designed to be compatible with all the functional areas within USSOCOM and Headquarters, U.S. Marine Corps. The MARSOC headquarters is responsible for identifying Marine special operations-unique requirements; developing Marine SOF tactics, techniques, procedures and doctrine; and executing assigned missions in accordance with designated conditions and standards.

From its inception in 2006 through 2012, MARSOC has conducted more than 125 operational overseas unit deployments of Marine Special Operations Teams (MSOTs) and Marine Special Operations Companies (MSOCs) in support of the geographic combatant commanders. While MARSOC's primary focus has been the support of operations in Afghanistan, units have been involved in many other missions that span the globe. To date, MARSOC has conducted missions in over 18 different countries. The majority of these missions focus on training partner nation forces, assisting in counter-narcoterrorism efforts and providing other subject matter expert guidance to countries in component commands such as U.S. Africa Command, U.S. Pacific Command, U.S. Southern Command and U.S. Central Command. In 2009, MARSOC deployed its first Special Operations Task Force HQ, built around a Marine Special Operations Battalion, to Afghanistan. MARSOC continues to deploy SOTFs to Afghanistan, recently executing the fourth such deployment. These MARSOC SOTFs provide command, control, coordination and support to multiple SOF elements from MARSOC, U.S. Army Special Operations Command (USASOC) and Naval Special Warfare Command (NSWCOM) throughout RC West and Southwest, an area of over 100,000 square miles.

**MARSOC Core Activities.** Special Operations require unique modes of employment, tactical techniques and training, and are often conducted in hostile, denied or politically sensitive environments. MARSOC is made up of regionally grounded and operationally astute Multidimensional Operators, formed into special operations teams that are forward deployed to conduct shaping, deterrence and crisis response operations. MARSOC is tasked by SOCOM with providing units specially trained in the following primary SOF core activities:

- Direct Action (DA)
- Special Reconnaissance (SR)
- Security Force Assistance (SFA)
- Counter-insurgency (COIN)
- Foreign Internal Defense (FID)
- Counterterrorism (CT)
- Information Operations (IO)

MARSOC is also tasked to provide support for Civil Affairs Operations, Military Information Support Operations, Unconventional Warfare and Counter Proliferation operations, as well as training, equipping, planning for and providing forces to execute SOF Command and Control.

#### MARSOC Subordinate Units

**Marine Special Operations Regiment (MSOR):** MSOR consists of a Headquarters Company and three Marine Special Operations Battalions (1st, 2d, and 3d). The regiment provides tailored, military combat-skills training and advisor support for identified foreign forces, in order to enhance their tactical capabilities and to prepare the environment as directed by USSOCOM as well as the capability to form the nucleus of a joint special operations task force. Marines and Sailors of the MSOR train, advise, and assist host nation forces - including naval and maritime military and paramilitary forces - to enable them to support their governments' internal security and stability; to counter subversion; and to reduce the risk of violence from internal and external threats. MSOR deployments are coordinated by MARSOC through USSOCOM, in accordance with engagement priorities for overseas contingency operations. MSOR HQ is located at Camp Lejeune, NC.

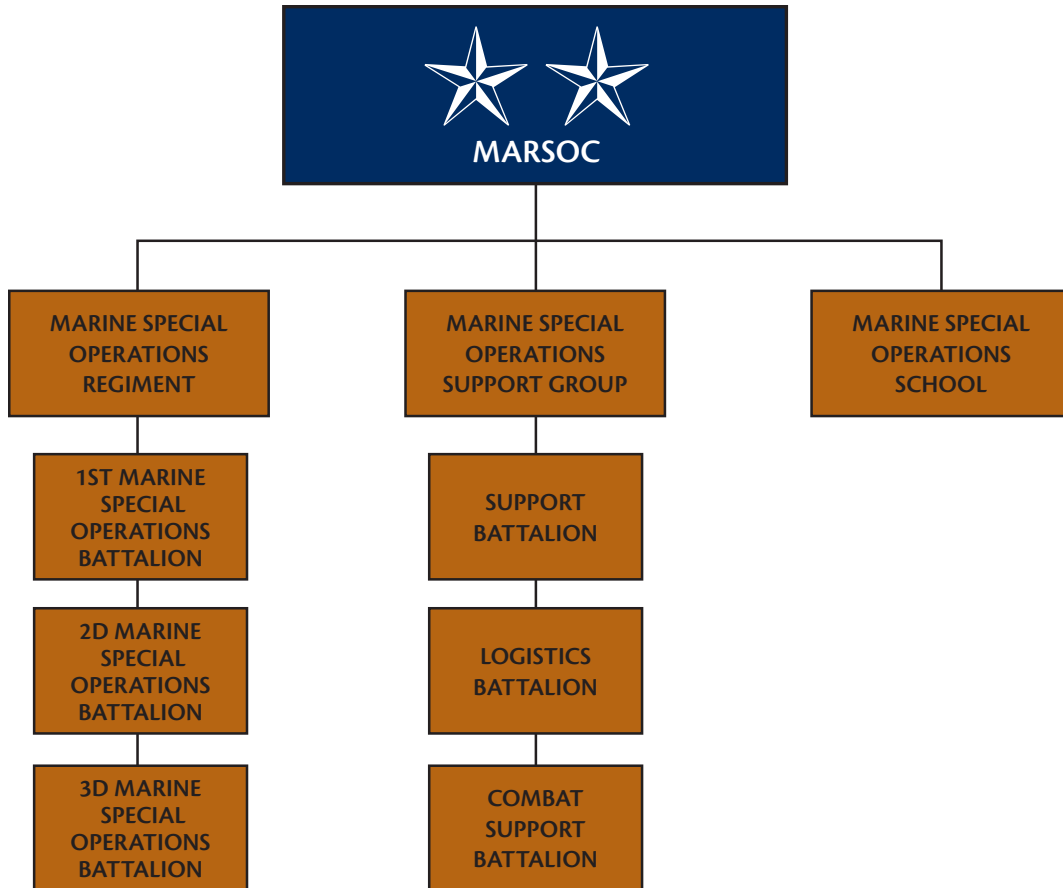
**Marine Special Operations Battalions (MSOB):** The 1st, 2d, and 3d MSOBs are organized, trained, and equipped to deploy for worldwide missions. The battalions are commanded by a Marine lieutenant colonel and consist of four MSOCs, which, when designated for deployment, are task organized with personnel

uniquely skilled in special equipment support, intelligence, and fire-support. Each MSOC is commanded by a Marine major and is capable of deploying task organized, expeditionary Marine SOF providing the above listed core activities in support of the geographic combatant commanders. MSOCs are also uniquely organized and tailored to conduct distributed operations in the littorals with counter-insurgency expertise and language and cultural capability. Each team within the company is designed and capable of limited split-team operations and trained to conduct FID, DA and SR missions both unilaterally and with partnered nation forces. 1st MSOB is located at Camp Pendleton, CA, and the 2nd and 3rd MSOBs are located at Camp Lejeune, NC.

**Marine Special Operations Support Group (MSOSG):** The MSOSG provides support capabilities for worldwide special operations missions as directed by the MARSOC commander. The MSOSG specifically provides all-source intelligence fusion, combined arms coordination, multi-purpose canine capability, special operations communications, and combat service support capability to MARSOC forces through its Combat Support Battalion, Logistics Battalion, and Support Battalion. The MSOSG deploys its capabilities in tailored operational support detachments as part of each MSOC and of each SOTF. The Support Group, Combat Support Battalion, and Logistics Battalion are located at Camp Lejeune, NC; the Support Battalion is located at Camp Pendleton to provide direct support to 1st MSOB.

**Marine Special Operations School (MSOS):** MSOS screens, assesses, selects, and trains Marines and Sailors for special operations assignments in MARSOC; provides both initial and advanced individual special operations training; and serves as MARSOC's training and education proponent in support of MARSOC requirements. MSOS is located at Camp Lejeune, NC.





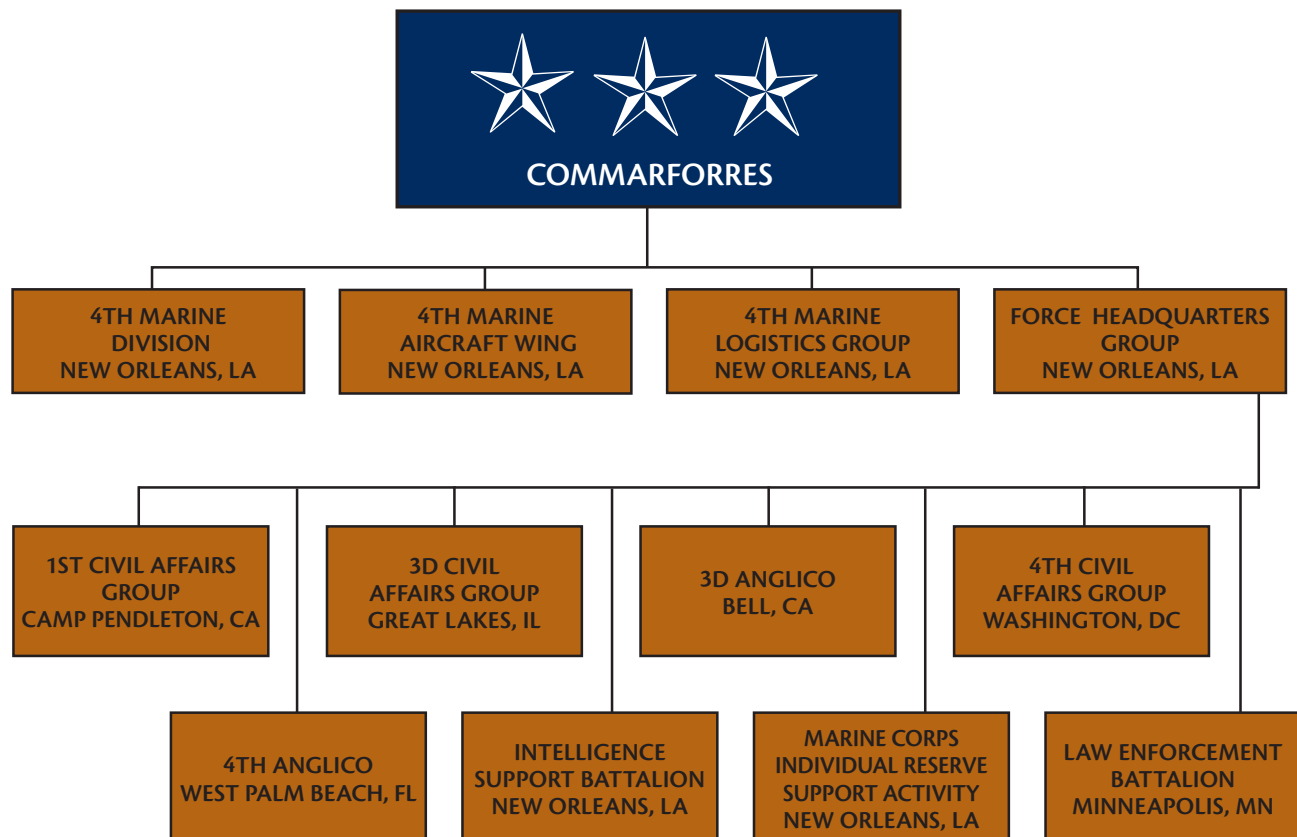
## MARINE FORCES RESERVE (MARFORRES)

Headquartered in New Orleans, Louisiana, MARFORRES is responsible for providing trained units and qualified individuals for active-duty service in times of war, national emergency, or in support of contingency operations. Marine Corps force expansion is made possible by activation of the Marine Corps Reserve. As an operational reserve, MARFORRES provides personnel and operational tempo relief for active component forces during times of peace.

Like the active component, MARFORRES is a combined-arms force with balanced ground, aviation, and logistics combat support units. MARFORRES capabilities are managed through MARFORCOM as

part of his global force management responsibilities for the Commandant. Commander, MARFORRES is also Commander, Marine Forces Northern Command (MARFORNORTH) and serves as the Marine component of NORTHCOM.

As of September 30, 2013, MARFORRES will have units located at 182 training centers in 47 states, Puerto Rico and the District of Columbia. The MARFORRES, in keeping with the Marine Corps Total Force concept, has been an integral force provider across the spectrum of combat and peacetime engagement. The ethos of MARFORRES is mobilization and combat readiness. This ensures the men and women of the Reserve stand ready, willing and able to answer the Nation's call at home and abroad at a moment's notice.



## MARINE FORCES RESERVE UNITS

Force Headquarters Group	New Orleans, LA	Marine Aircraft Group 41	JRB Fort Worth, TX
Intelligence Support Battalion	New Orleans, LA	Marine Aviation Logistics Squadron 41	JRB Fort Worth, TX
4th Air and Naval Gunfire Liaison Company	West Palm Beach, FL	Marine Medium Tilt-Rotor Squadron 764	Miramar, CA
6th Air and Naval Gunfire Liaison Company	Concord, CA	Marine Fighter Attack Squadron 112	JRB Fort Worth, TX
1st Civil Affairs Group	MCB Camp Pendleton, CA	Marine Aerial Refueler Transport Squadron 234	JRB Fort Worth, TX
2d Civil Affairs Group	Miami, FL	Marine Fighter Training Squadron 401	MCAS Yuma, AZ
3d Civil Affairs Group	NS Great Lakes, IL	Marine Wing Support Squadron 473	MCAS Miramar, CA
4th Law Enforcement Battalion	St. Paul, MN		
6th Communications Battalion	Brooklyn, NY		
<b>4TH MARINE DIVISION</b>	<b>NEW ORLEANS, LA</b>	<b>Marine Aircraft Group 49</b>	<b>JRB McGuire-Dix-Lakehurst, NJ</b>
23d Marine Regiment	San Bruno, CA	Marine Aviation Logistics Squadron 49	Stewart ANG Base, NY
1st Battalion	Houston, TX	Marine Aerial Refueler Transport Squadron 452	Stewart ANG Base, NY
2d Battalion	Pasadena, CA	Marine Medium Helicopter Squadron 774	NAS Norfolk, VA
3d Battalion	Bridgeton, MO	Marine Heavy Helicopter Squadron 772	JRB McGuire-Dix-Lakehurst, NJ
2d Battalion, 24th Marines	Chicago, IL	Marine Light Attack Helicopter Squadron 773	Warner Robins AFB, GA
25th Marine Regiment	Ft. Devens, MA	Marine Wing Support Squadron 471	Minneapolis, MN
1st Battalion	Ft. Devens, MA	Marine Wing Support Squadron 472	JRB McGuire-Dix-Lakehurst, NJ
2d Battalion	Garden City, NY		
3d Battalion	Brook Park, OH	<b>Marine Air Control Group 48</b>	<b>Great Lakes, IL</b>
1st Battalion, 24th Marines	Mount Clemens, MI	Marine Tactical Air Command Squadron 48	Great Lakes, IL
14th Marine Regiment	Fort Worth, TX	Marine Air Control Squadron 24	Virginia Beach, VA
2d Battalion (HIMARS)	Grand Prairie, TX	Marine Air Support Squadron 6	Westover Air Reserve Base, MA
3d Battalion	Bristol, PA	Marine Wing Communications Squadron 48	Great Lakes, IL
5th Battalion	Seal Beach, CA	Marine Unmanned Aerial Vehicle Squadron 4	MCAS Yuma, AZ
3d Force Reconnaissance Company	Mobile, AL		
4th Force Reconnaissance Company	Alameda, CA	<b>Marine Aviation Training Support Group 42</b>	<b>NAS Pensacola, FL</b>
4th Tank Battalion	San Diego, CA		
4th Assault Amphibian Battalion	Tampa, FL		
4th Light Armored Reconnaissance Battalion	MCB Camp Pendleton, CA	<b>4TH MARINE LOGISTICS GROUP</b>	<b>NEW ORLEANS, LA</b>
4th Combat Engineer Battalion	Baltimore, MD	Combat Logistics Regiment 4	Kansas City, KS
4th Reconnaissance Battalion	San Antonio, TX	Combat Logistics Battalion 23	Fort Lewis, WA
		Combat Logistics Battalion 451	Charlotte, NC
<b>4TH MARINE AIRCRAFT WING</b>	<b>NEW ORLEANS, LA</b>	4th Dental Battalion	Marietta, GA
Marine Transport Squadron		4th Medical Battalion	San Diego, CA
Det VMR Andrews AFB	Andrews Air Force Base, MD	6th Engineer Support Battalion	Portland, OR
Det VMR JRB Belle Chase	New Orleans, LA	Combat Logistics Regiment 45	Marietta, GA
		Combat Logistics Battalion 453	Aurora, CO
		Combat Logistics Battalion 25	Red Bank, NJ

Force Structure Changes as of 30 Sept 2013

### U.S. MARINE CORPS FORCES, CYBERSPACE COMMAND (MARFORCYBER)

Recognizing the significance of the cyberspace domain to national security, the Secretary of Defense directed the establishment of U.S. Cyber Command (CYBERCOM) as a sub-unified command under the U.S. Strategic Command. The primary objective of CYBERCOM is to integrate the computer network operations capabilities of the services and agencies in support of the National Strategy to Secure Cyberspace (NSSC).

In response, the Marine Corps established U.S. Marine Corps Forces Cyberspace Command (MARFORCYBER) in October 2009. (This was complemented by the standing up of the Navy’s U.S. Tenth Fleet/Fleet Cyber Command in January 2010.) MARFORCYBER’s mission is to plan, coordinate, integrate, synchronize, and direct full spectrum Marine Corps cyberspace operations. This includes Department of Defense (DoD) Global Information Grid (GIG) operations, defensive cyber operations, and when directed, planning and executing offensive cyberspace operations. These operations support the Marine Air Ground Task Force (MAGTF), joint, and combined cyberspace requirements that enable freedom of action across all warfighting domains and deny the same to adversarial forces.

#### MARFORCYBER Subordinate Units

##### *Marine Corps Network Operations and Security Center (MCNOSC)*

The MCNOSC’s mission is to direct global network operations and defense of the Marine Corps Enterprise Network (MCEN). MCNOSC also provides technical leadership to facilitate seamless information exchange by Marine and joint forces operating worldwide. The MCNOSC is the Corps nucleus for enterprise data network operations and defense, network support to deploying forces, and technical development of network-enabled information technology (IT) solutions. The MCNOSC activities include the following:

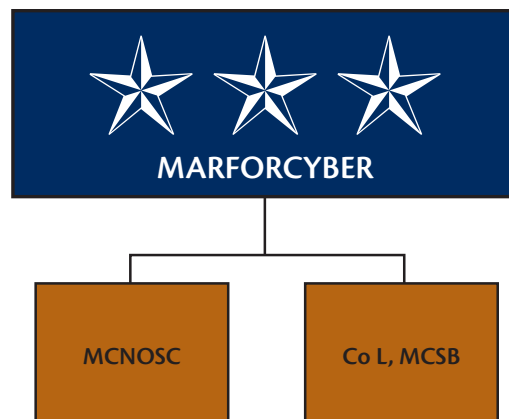
- Operating and defending the enterprise aspects of the MCEN

- Collecting and sharing Global Information Grid (GIG) situational awareness
- Reporting and directing actions that proactively address threats and vulnerabilities
- Responding to operational incidents
- Providing technical leadership to ensure that Marine Corps and joint capabilities leverage new technologies to the advantage of the Marine warfighter.

MCNOSC personnel monitor MCEN operations around the clock through an array of strategically positioned sensors and a “24/7” watch floor to ensure the availability and security of the network. Under the operational control of MARFORCYBER, the MCNOSC conducts preventative actions, attack detection, and incident response to counter rapidly expanding, increasingly diverse, and ever-more complex threats to defend the MCEN against cyber attack and enable the Marine Corps use of cyberspace.

##### *Company L, Marine Cryptologic Support Battalion (MCSB)*

Assigned under the operational control of MARFORCYBER, Company L’s mission is to plan and execute offensive cyberspace operations in order to support joint and Marine Corps requirements. Additionally, Company L deploys Marines to provide tailored subject matter expertise in support of MEF and MAGTF operations.





## INSTALLATIONS

### MARINE CORPS INSTALLATIONS COMMAND (MCICOM)

The Commandant of the Marine Corps (CMC) directed a reorganization of the Installations and Logistics Department, Headquarters Marine Corps, to include the creation of Marine Corps Installations Command (MCICOM) subordinate to the Deputy Commandant, Installation and Logistics. The CMC further stipulated that MCICOM would consist of a Headquarters located at Washington, D.C., and three subordinate commands: Marine Corps Installations East; Marine Corps Installations Pacific; and Marine Corps Installations West. MCICOM achieved full operational capability at the commencement of FY 2013.

Marine Corps installations directly support Marine Corps Operating Forces, individual Marines, and family members. They are essential components in the foundation of national defense as they are the force projection platforms that support training, sustainment, mobilization, deployment, embarkation, redeployment, reconstitution, and force protection. However, our installations face the most significant challenges in their history including increasing mission scope and complexity, declining resources, and growing threats to their long-term viability. The most pressing mission challenge is to maintain high quality installation support despite resource constraints.

### MARINE CORPS LOGISTICS COMMAND (MCLC)

Headquartered in Albany, Georgia, MCLC provides worldwide, integrated logistics, supply chain, and distribution management; maintenance management; and strategic prepositioning capability in support of the operating forces and other supported units. The services and support provided by MCLC maximize supported unit readiness, synchronize distribution processes, and support Marine Corps enterprise and program-level total life cycle management.

MCLC is the Marine Corps Executive Agent for the tactical coordination, planning, and execution of

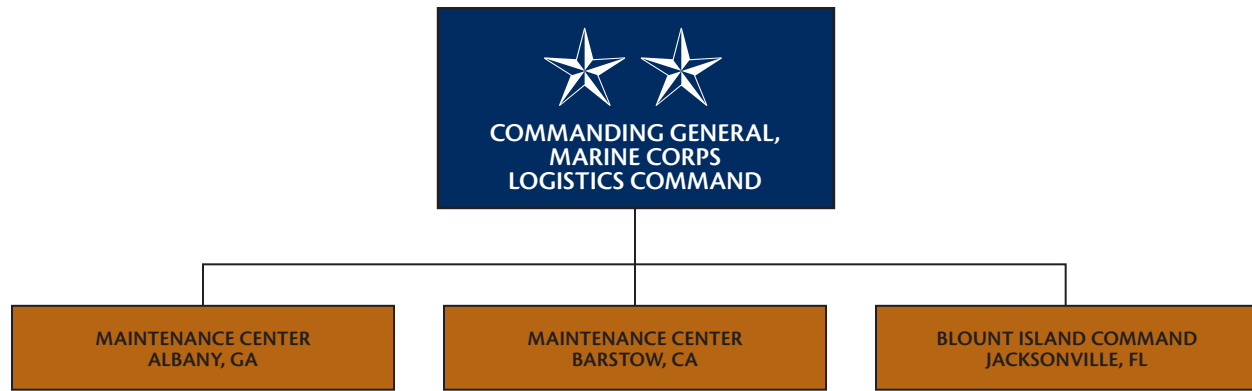
ground equipment reset and is responsible for end-to-end ground equipment reset from Southwest Asia actions from theater, through the appropriate Operation Enduring Freedom (OEF) Reset Account and until all reset maintenance actions are complete. As such, the Command is fully engaged in expediting, tracking, and processing principle end items and other classes of supply from Afghanistan. Additionally, MCLC manages the enterprise lifecycle maintenance program that is used to reset designated ground weapon systems.

Through Marine Corps Logistics Command (Forward) (MCLC (Fwd)), located in Afghanistan, MCLC provides critical sustainment logistics support to Marine forces currently deployed to Afghanistan. MCLC (Fwd) also executes in-theater reset actions, conducts the retrograde of equipment, and assists the redeployment actions of Marine Forces Central Command and the OEF Marine Air Ground Task Force.

MCLC is structured to execute its core competencies via its four subordinate commands, its Marine Expeditionary Force (MEF) Support Teams co-located with each MEF and Marine Forces Reserve Headquarters, and its liaison officers in the National Capital Region, at Marine Corps Systems Command and the Program Executive Office-Land Systems.

### Blount Island Command

Blount Island Command (BIC), located in Jacksonville, Florida, ensures that ground equipment and supplies associated with Marine Corps prepositioning programs afloat and ashore are of the highest state of readiness. BIC services the Marine Corps entire maritime prepositioning fleet, currently consisting of 12 ships and growing to 14 by 2015, within a three-year period, and also services the Marine Corps' equipment maintained in the Norwegian caves as part of the Marine Corps Prepositioning Program-Norway. The BIC facility is being expanded to handle the demands of the future Maritime Prepositioning Force (MPF) program over the long term. In addition to the MPF mission, BIC manages the Marine Expeditionary Unit (MEU)



Augmentation Program (MAP). Supporting the MEU's that serve as U.S. Central Command's strategic reserve, the MAP is an inventory of equipment, mainly rolling stock and armored vehicles, on call in Kuwait.

#### Marine Depot Maintenance Command

In December 2011, the Commandant of the Marine Corps approved the establishment of MCLC's subordinate command, the Marine Depot Maintenance Command (MDMC). MDMC headquarters is located in Albany, Georgia with Production Plants in Albany and Barstow, California which consolidated the two production plants under a single headquarters, will reduce overhead, provide greater flexibility, and gain critical efficiencies to better support Marines in combat and in training. The production plants repair, rebuild, and modify all types of Marine Corps ground-combat, combat-support, and combat-service support equipment. These two production plants can be rapidly realigned for new capability and capacity to meet the immediate needs of the warfighter, to include the ongoing deployment of maintenance teams to OEF to provide support for combat operations and the continuing execution of the reset of equipment returned from Afghanistan. Both production plants are designated as Centers of Industrial and Technical Excellence for ground and amphibious combat and combat support systems, combat/tactical vehicles, automotive/construction equipment, ordance/weapons, general-

purpose equipment, and communications/electronics equipment.

#### Marine Corps Logistics Command (Forward)

MCLC (Fwd) directs MCLC operations conducted in Afghanistan in order to provide service-level operational logistics support to Marine Corps forces as directed by Commander U.S. Marine Corps Forces Central Command and to execute in-theater Redeployment and Retrograde in support of Reset and Reconstitution actions. It provides other services and capabilities that align with the MCLC core competencies of supply, maintenance, and distribution to sustain the readiness of combat forces and allow them to focus on their tactical mission. Areas of effort includes management of a forward-in-stores capability, which is an inventory of critical equipment that is used to replace damaged or destroyed items immediately instead of waiting for them to be shipped from the United States. MCLC (Fwd) manages the principle end item rotation program; an effort designed to maintain a steady flow of refurbished equipment throughout the theater and coordinates the use of available in-theater maintenance resources to keep equipment combat ready. Finally, MCLC (Fwd) is responsible for the retrograde of USMC equipment from Afghanistan by identifying, accounting for, and shipping equipment to its reset destination.

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### Marine Corps Logistics Command (MCLC) Headquarters Group (HQ)

MCLC HQ Group, located in Albany, Georgia, provides for the safety and welfare, ensures good order and discipline, and maintains individual readiness for all Marines and sailors assigned to the headquarters and MDMC.

# CHAPTER 3





# PROGRAMS

## INTRODUCTION

The primary role of the Marine Corps in the 21st century is to be the Nation's *Expeditionary Force-in-Readiness*. It is a force that provides combined-arms operating forces — including integrated aviation and logistical components — for service as part of naval, joint, and combined forces world wide. The Marine Corps fills a unique role in the capability range of America's armed forces. A *Middleweight Force*, we are lighter than the Army, and heavier than Special Operations Forces (SOF). Marine Corps forces magnify U.S. power-projection capabilities, ensuring American military power remains influential during peacetime, compelling in crisis, and decisive in war.

As we look ahead, we will reinvigorate and reinforce our credentials as a lighter, faster, hard-hitting, expeditionary, and sea-based Marine Corps that relies on agility, shock, and surprise. Innovation and fiscal responsibility likewise will continue to be hallmarks of the Marine Corps. We are continuing to invest limited resources to restore combat capability and enhance our Marines' readiness at home and in overseas operating areas. We also are monitoring our total investment requirements and measuring them against changing operational demands. In Marine Corps ground and aviation programs, for example, we continue to test, develop, and procure dual-use systems and employ emerging technology. Throughout, however, our focus remains on the individual Marine's ability to carry out the tasks at hand.

Chapter Three of the 2013 Edition of *Concepts and Programs* provides information on Marine Corps programs of record and major end-item equipment, which will ensure that current and future Marines have what they need to accomplish the mission.

## ACQUISITION CATEGORIES (ACAT) AND TERMS

The category of an acquisition program shall generally be determined based upon an assessment of cost, complex and risk. A description of the most commonly discussed Acquisition Category (ACAT) levels follows:

### ACAT I: MAJOR DEFENSE ACQUISITION PROGRAMS (MDAP)

The Undersecretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) designates MDAPs as ACAT ID (Defense Acquisition Board) or ACAT IC (Component). The Milestone Decision Authority (MDA) for an ACAT ID program is USD(AT&L), and the MDA for ACAT IC (Component) Department of the Navy (DON) programs is the Secretary of the Navy or the Assistant Secretary of the Navy Research, Development & Acquisition (ASN(RDA)). To achieve this level of designation, a program must exceed \$365 million in FY 2000 dollars in research and development funding, exceed \$2.190 billion in FY 2000 dollars in procurement funding or be designated as “Special Interest” by the MDA.

The Marine Corps leads the following ACAT I programs: the MV-22 Osprey Program; the Global Combat Support System; the Ground Aviation Task Oriented Radar; the Medium Tactical Vehicle Replacement; and the Common Aviation Command and Control System. The Marine Corps also participates in numerous joint ACAT I programs, including the Global Broadcast Service, the Joint Light Tactical Vehicle, and the Joint Tactical Radio System.

### ACAT IA: MAJOR AUTOMATED INFORMATION SYSTEMS (MAIS)

USD(AT&L) designates MAIS programs as ACAT IAM (MAIS) or ACAT IAC (Component) and is the MDA for ACAT IAM programs, unless delegated to the Assistant Secretary of Defense for Networks and Information Integration (ASD(NII)). The ASN(RDA) is the MDA for DON ACAT IAC programs. These are

the largest automated information system (AIS) acquisition programs. There are several cost thresholds for this level, which include AIS programs with single-year funding, in all appropriations in excess of \$32 million in FY 2000 dollars, with total program cost in excess of \$126 million in FY 2000 dollars, or total lifecycle costs in excess of \$378 million in FY 2000 dollars, or designated as “Special Interest” by the MDA.

### ACAT II

These programs do not meet the threshold for ACAT I, but have research and development funding in excess of \$140 million or procurement funding in excess of \$660 million. They are also known as Major Systems and the USD(AT&L) or his designee is the MDA for ACAT II programs. The Marine Corps funds two ACAT II program: the Logistics Vehicle Systems Replacement and the Lightweight 155 Howitzer.

### ACAT III

Programs that do not meet the cost threshold for ACAT I or II but involve combat capability are designated ACAT III or IV programs. Within the Marine Corps, the designation generally depends on the level of program management and oversight assigned by Commander, Marine Corps Systems Command, Program Executive Officer Land Systems, or the Direct Reporting Program Manager when that applies. The Marine Corps currently manages more than 24 ACAT III programs.

### ACAT IV

There are two categories of ACAT IV programs. ACAT IVT (Test) programs require Operational Test and Evaluation (OT&E), while ACAT IVM (Monitor) programs do not. Commander, Operational Test and Evaluation Force (COMOPTEVFOR) or Director, Marine Corps Operational Test and Evaluation Activity (Director, MCOTEA) may elect to monitor ACAT IVM programs. The Marine Corps manages nearly 40 such programs.

### ABBREVIATED ACQUISITION PROGRAMS (AAPS)

AAPs are programs that do not meet the criteria for ACAT IV or above and does not require operational test and evaluation. Developmental costs for AAPs cannot exceed \$10 million and total program value cannot exceed \$50 million. For information technology systems, developmental costs cannot exceed \$15 million, or program costs exceed \$30 million. For the past several years, the Marine Corps manages approximately 100 AAP programs at any given time.

### OPERATIONS AND SUPPORT PROGRAMS (O&S PROGRAMS)

As total life-cycle managers of already acquired and fielded systems, the Marine Corp Systems Command maintains control and management oversight responsibilities for more than 300 independent systems needed to support the warfighter.

### ACQUISITION PHASES AND TERMS

**Matériel Solution Analysis Phase (Pre-Milestone A):** The purpose of this phase is to assess potential matériel solutions and to satisfy the phase-specific entrance criteria for the next program milestone designated by the MDA. The most promising systems concepts shall be defined, in part, by broad objectives for performance and the identification of interoperability and integration requirements within a family of systems or system of systems. The Matériel Solution Analysis Phase ends when the Analysis of Alternatives (AoA) has been completed, matériel solution options for the capability need identified in the approved Initial Capabilities Document (ICD) have been recommended, and the phase-specific entrance criteria for the initial review milestone have been satisfied.

**Technology Development Phase (Pre-Milestone B):** The purpose of this phase is to reduce technology risk, to determine and mature the appropriate set of technologies to be integrated into a full system, and to demonstrate critical technology elements on prototypes. Technology Development is a continuous tech-

nology discovery and development process reflecting close collaboration between the science and technology (S&T) community, the user, and the system developer. It is an iterative process designed to assess the viability of technologies while simultaneously refining user requirements.

**Engineering and Manufacturing Development (Pre-Milestone C):** This is the phase in which a system or increment of capability is developed. Work in this phase includes reduction of integration and manufacturing risk, ensuring operational supportability, human systems engineering, design for the ability to produce, and demonstration of system integration, interoperability and utility.

**Production and Deployment (Post-Milestone C):** This is the phase in which the operational capability that satisfies mission needs is achieved through operational test and evaluation to determine effectiveness, and suitability. Milestone C authorizes entry into Low Rate Initial Production (LRIP, for MDAPs and major systems), into production or procurement (for non-major systems that do not require LRIP), or into limited deployment in support of operational testing for MAIS programs or software-intensive systems with no production components. The MDAPs and other programs on the Office of the Secretary of Defense (OSD) Test and Evaluation Oversight List, Production and Deployment have two major efforts — LRIP and Full-Rate Production and Deployment — and require a Full-Rate Production (FRP) Decision Review. For MAIS programs or software intensive systems with no production components, the FRP Decision Review is referred to as the Full Deployment Decision Review.

**A Non-Developmental Item (NDI):** An NDI is any previously developed item of supply used exclusively for government purposes by a federal agency, a state or local government, or a foreign government with which the United States has a mutual defense cooperation agreement. An NDI requires only minor modifications or modifications of the type customar-

ily available in the commercial marketplace in order to meet the requirements of the Marine Corps.

**Initial Operational Capability (IOC):** In general, IOC is reached when some units or organizations in the force structure scheduled to receive a system have received it and have the ability to employ and maintain it. The specifics for any particular system IOC are defined in that system's Capability Development Document (CDD) and Capability Production Document (CPD).

**Full Operational Capability (FOC):** In general, FOC is attained when all units and organizations in the force structure scheduled to receive a system have received it and have the ability to employ and maintain it. The specifics for any particular system FOC are defined in that system's CDD and CPD.







**PILLAR 1:**  
HIGH QUALITY PEOPLE





# SECTION 1: MANPOWER



## INTRODUCTION

Our Marine Corps is an expeditionary force fully trained and capable of executing assigned missions. Our strategic guidance rightfully focuses our attention on the Pacific and Central Command regions. Navy-Marine Corps forward basing, response capabilities and plans are already positioned to support that strategy, yet we will remain vigilant and capable to respond on short notice in other areas of the world as our Nation requires. Marines continually stand ready to contribute to a decisive joint force and can help provide access for that force wherever needed.

Our Corps of today and tomorrow will maintain its high standards of training, education, leadership, and discipline while contributing vital capabilities to the Joint Force across the spectrum of military operations. The emerging strategy revalidates our role as America's Expeditionary Force in Readiness. Our partnership with the Navy enables a forward-deployed and engaged force that shapes, deters, responds, and projects power well into the future.

## FORCE STRUCTURE REVIEW/ DRAWDOWN IN FORCES



The Marine Corps conducted a capabilities-based Force Structure Review beginning in the fall of 2010 in order to organize, rebalance and posture the force for the challenges of the emerging security environment of the future. The Force Structure Review Group (FSRG) incorporated the lessons learned from 10 years of combat and addressed 21st century challenges confronting our Nation and its Marine Corps. The review's charter included efficient force structure planning, later termed as "best value," with regard to capability, cost and readiness relative to the operational requirements of the forward-engaged geographic combatant commanders. The 2010 FSRG concluded with a CMC approved plan to field a comprehensive force, with an approximate end strength of 186,800, which meets the Title 10 requirements of the Marine Corps in crisis response and forward presence. However, further fiscal constraints articulated within the Fiscal Year 2013 Presidential Budget required additional adjustments to the FSRG's proposed force, drawing down to approximately 182,100 end strength. The adjusted force structure, however, maintained the overall theme and charter of FSRG, employing wargamed contingencies in capability draw down, while yet maintaining overall capabilities necessary in the 21st century for Marines to fulfill their primary role as America's Expeditionary Force in Readiness, even at a reduced capacity.

## END STRENGTH

Fiscal Year 2013 marks the first year of a four-year drawdown period as the Marine Corps moves toward the 182,100 force. Personnel costs account for about 60 cents of every Marine Corps dollar, and the resulting 182,100 Marine active duty force, supported by our Reserve component, retains the capacity and capability to support steady state and crisis response operations through rotational deployments and to rapidly surge in support of major contingency operations.

As we reduce our active component end strength, we must manage the rate of reduction carefully and responsibly. The Marine Corps plans to draw down our end strength by approximately 5,000 Marines per year. The continued resourcing of this gradual ramp down is vital to keeping faith with our Marines, many of whom have served in combat, and their families. This pace of drawdown will allow for completion of our mission in Afghanistan while ensuring proper resiliency in the force relative to dwell times. As our Nation continues to reduce the size of its Armed Forces, the Marine Corps will guard against the tendency to focus on pre-9/11 end strength levels which would neither account for the lessons learned from 10 years of war, nor address the irregular warfare needs of the modern battlefield. Our 182,100 Marine Corps represents fewer infantry battalions, artillery battalions, fixed wing aviation squadrons, and general support combat logistics battalions than we had prior to 9/11. However, it adds cyber warfare capability, special operators, wartime enablers, and higher unit manning levels—all lessons gleaned from ten years of combat operations. It is a very capable force.

We are also committed to keeping faith with Marines, Sailors and their families who have sacrificed so much over the past decade of war. Personnel reductions that become precipitous are among the worst measures that can be employed to save money. Our all-volunteer force is built upon a reasonable opportunity for retention and advancement. Unplanned and unexpected wholesale cuts undermine the faith and



confidence in service leadership and create long-term experience deficits with negative operational impacts. Such an approach would no doubt do significant long-term damage to our ability to recruit and maintain a quality force.

### MARINE CORPS RECRUITING COMMAND (MCRC)



Headquartered in Quantico, VA, Marine Corps Recruiting Command (MCRC) conducts operations to recruit qualified individuals for enlistment or commissioning into the United States Marine Corps and Marine Corps Reserve. The goal is to attain the assigned Total Force personnel requirements by component and category in accordance with the applicable fiscal year Marine Corps accessions strategy (Manpower Accessions Plan Memoranda), the Recruiting Operations Order, and as otherwise directed by the Commandant of the Marine Corps. MCRC consists of two recruiting regions with three recruiting districts each. MCRC has 3,760 Marine Corps recruiters operating out of 48 recruiting stations, 615 recruiting sub-stations, and 72 officer-selection sites. MCRC maintains facilities throughout the continental United States, Alaska, Hawaii, Puerto Rico, Guam, the U.S. Virgin Islands, and the Northern Mariana Islands.

### DIVERSITY

Rapidly changing demographics of the Nation will continue to propel diversity forward as a strategic issue. Key to the Marine Corps diversity effort is the understanding that the objective is not to structure a force that merely reflects current demographics. It is through actively seeking the best and brightest young men and women from all communities in the Nation that we achieve diversity of intellect, talent, culture and demographic representation—all of which raise the total capability of our Corps. Efforts to generate more awareness about officer programs in underrepresented communities are underway. Since 2011, we have conducted leadership seminars at many locations throughout our country, introducing diverse college undergraduates and key influencers to Marine leadership traits and Marine Corps leadership opportunities. We are actively seeking out new communities within which to continue this effort. While minority officer accessions saw an increase during Fiscal Year 2012, we must nurture this gain and future successes with effective career development and mentorship initiatives. Doing so will set the conditions for more diverse officer profile projections. Overall, we seek to communicate the Marine Corps diversity mission through community outreach and recruit marketing; to ensure continued opportunities for merit based development and advancement; and to optimize training and education to increase the understanding for all Marines of the value that diversity brings to the Total Force.

### MANPOWER RECRUITING

FY 2012 was another productive year for the Marines of Marine Corps Recruiting Command as their sustained recruiting efforts resulted in 35,964 total force non-prior service enlisted, 1,464 officer, and 4,210 prior service Marine accessions with historic highs in quality indicators. The tireless effort of the recruiting force was instrumental in the Marine Corps



attainment of the overall end strength goal of 198,000. Moving into FY 2013, MCRC remains poised to meet future accession requirements and the challenges of recruiting an all volunteer force, by maintaining an appropriately sized and resourced recruiting force.

Recruiting remains the lifeblood of the Marine Corps. The efforts of the recruiting force and the quality of the individual Marine remains the bedrock upon which the Corps is built. To recruit the high quality men and women necessary to earn the title of “Marine” requires an equal investment toward who becomes a recruiter. Those chosen to become recruiters undergo extensive screening at their home station to ensure qualifications for this demanding independent duty are met. These are the best the Marine Corps has to offer and they are specifically chosen to be ambassadors of the Marine Corps to communities across America. The intent is to have a Marine Corps representative that embodies the values of the Corps to the American public and inspires and influences young men and women to seek the challenge of becoming a Marine. This is further refined by providing intensive training at Recruiters School, so that each recruiter is thoroughly prepared and armed with the most current information, policies, and techniques to face the multi-faceted challenges associated with recruiting duty. This training is continuously reinforced and is built upon throughout a recruiter’s tour to ensure proficiency, preparedness, and success.

Even before a prospective applicant meets with a recruiter in person, it is likely that they have, in some way, already been exposed to the Marine Corps mes-

sage of making Marines, winning our nation’s battles and developing quality citizens. This is strategically accomplished through comprehensive marketing and advertising programs. These programs serve to reinforce the elite warrior image and send the same positive message that is communicated daily by the individual recruiter and supported by the recruiter’s collateral materials. These programs are also critical in maintaining our message, emphasizing core competencies of building brand awareness; generating quality leads for recruiters and developing recruiter support material for use in the recruiting process. High-quality advertising efforts properly focused on the target markets of prospective recruits and their influencers create and maintain awareness of Marine Corps opportunities amongst America’s young men and women.

Paid advertising continues to be the most effective means to connect with the public and, as a result, remains the focus of MCRC’s advertising efforts. As advertising costs increase, it is vital that our advertising budgets remain competitive in order to ensure that our recruiting message reaches the right audience. The ever-present reality of a down-sizing Marine Corps, an active operational war front, and a reduced budget presents new challenges in FY 2013 and beyond. MCRC is able to avoid historical post-drawdown surges in the out years by maintaining the manpower and funding that is required to meet Marine Corps personnel and strength levels. Marine Corps recruiting successes during the past several years are a direct reflection of the superior efforts of a quality recruiting force and the supporting arms of effective marketing and advertising programs.

MCRC achieved success in FY 2012 by making 100 percent of our enlisted shipping objectives and exceeding the quality standards for both the Department of Defense (DoD) and the Marine Corps. For example, 99.9 percent of those shipped to recruit training were Tier 1 high school graduates, above the DoD and Marine Corps standards of 90 and 95 percent, respectively. Additionally, 75.3 percent were in the I-III upper

mental group, which again is well above the DoD and Marine Corps standards of 60 percent and 63 percent, respectively. The Marine Corps Reserve achieved 100 percent of its recruiting goals with the accession of 5,450 Non-Prior Service Marines. Of these, 99.9 percent were Tier I high school graduates and 78.1 percent were in the I-III mental groups. In addition, MCRC accessed 4,210 Prior Service Marines into the Marine Corps Reserves, achieving 100 percent of the objective.

Success was also achieved in the officer mission by obtaining 101 percent in all categories of air, ground, and law. Coupled with the contributions of the U.S. Naval Academy (USNA) and the Naval Reserve Officer Training Corps (NROTC) programs, the overall annual officer requirement was met. With a drive on finding the highest caliber of officers, the Marine Corps Officer Selection Teams are focusing on college campus markets for contracting future officers through the Platoon Leaders Class (PLC) Program. Every effort is being made to ensure that the quality of the future Officer Corps is maintained for years to come.

Diversity representation throughout the Marine Corps, both in enlisted and officer ranks, remains an important priority. FY 2012 showed continued progress in MCRC's efforts to further diversify new officer accessions. Hispanic officer accessions saw an increase for the fourth consecutive year, and for the first time ever, MCRC awarded the maximum allotment of 4-year Frederick C. Branch Scholarships. The All Community Approach remains the beat that drives MCRC's battle rhythm in engaging the American public and increasing the Corps connectedness to the society we serve. MCRC is carrying the message of leadership opportunities within the Corps to all segments. With this determined approach, MCRC will help potential applicants see the Marine Corps as a primary option and it raises officer program awareness with younger audiences, in turn feeding our seeding programs.

The results achieved during FY 2012 have upheld Marine Corps Recruiting Commands legacy of re-

cruiting success. The same intensity, dedication, and commitment to achieving mission that have been the foundation of past success will remain the guide to the future.

## MARINE CORPS RECRUITING INFORMATION SUPPORT SYSTEM (MCRISS)

### DESCRIPTION

The MCRISS streamlines the entire enlistment process and provides immediate benefits in man-hour savings by eliminating redundant data entry and improving the quality of information available. Moreover, the system directly interfaces with and supports key information technology initiatives from the U.S. Military Entrance Processing Command by electronically scheduling applicants for processing and receiving electronic processing results. MCRISS interfaces with the Office of Personnel Management to ensure security background checks are fully completed on each applicant. MCRISS harnesses state-of-the-art technology and provides the Marine Corps Recruiting Command with a solid foundation from which to grow future manpower information systems such as MCRISS-Recruiting Sub-Station (RSS) and MCRISS-Officer Selection System (OSS).

The deployment of MCRISS-RSS and OSS automates both the officer and enlisted side of recruiting at the recruiter/officer selection officer (OSO) level by organizing every effort and providing the proven framework of systematic recruiting. Systematic recruiting establishes procedures for standardization, management/planning, training, and action by focusing the OSO, RSS SNCOIC and recruiter on those activities and programs vital to effective recruiting. This effort will further eliminate redundant data entry and save the most valuable asset, time.

## OPERATIONAL IMPACT

Time is the officer or enlisted recruiter's greatest challenge and most precious asset. A Marine's achievement and success on recruiting duty is measured only by the number of qualified quality individuals interviewed, contracted, and shipped to recruit training or Officer Candidate School. MCRISS-RSS/OSS, coupled with solid skills, will systematically organize the Marine's day, week, and month, thereby saving time and making the demanding task of "mission accomplishment" more efficient and effective. With added organization, the recruiter will be armed to conduct prospecting in an efficient manner, thus saving time and ensuring consistency in the execution of prospecting plans.

## PROGRAM STATUS

FY 2013 effort will include a hardware refresh in order to adequately support the future growth and functionality of MCRISS by leveraging industry best practices. Also, future endeavors will include expanding the system to support mobile technology. A mobile technology initiative will deliver the utmost flexibility. The initiatives for FY 2013 will be focused and concerted efforts resulting in a system that is efficient, effective, and utilized by all levels of recruiting.

## MARINE CORPS RETENTION

### ENLISTED PERSONNEL

Enlisted retention achievements contribute to the Marine Corps success in reaching key end strength milestones and ensuring the proper grade composition and experience levels in the enlisted career force. The Marine Corps continues to retain both first-term and subsequent-term enlisted Marines in order to shape the Non-Commissioned Officer and Staff Non-Commissioned Officer leadership required to meet its active component end strength. In Fiscal Year 2012, we achieved our desired end strength and enforced strict first-term boat-space caps. In addition to achieving our aggregate retention mission, we achieved an impressive 97.2 percent Military Occupational Specialty match with our first-term alignment program, which ensures proper grade shaping for the future career force. Retention goals will remain aggressive as the Marine Corps continues to shape its enlisted career force. The Selective Reenlistment Bonus Program (SRBP) has aided reenlistment endeavors and improved retention for many of our critical skill shortages.

Although SRBP greatly assists with retention success, intangible attributes such as pride of service and satisfaction of leadership remain significant influences on retention. All leaders within the officer and enlisted ranks must ensure Marines are educated on the importance of retention and on our evolving retention policies and incentives. Leaders must emphasize the intangibles of service to aid quality Marines in their individual reenlistment decisions.

Marine Corps retention efforts are enhanced by career planners who specialize and assist commanders in the retention of Marines. Also supporting retention efforts is the Enlisted Career Counseling and Performance Evaluation Unit resident in the Enlisted Assignments Branch at Headquarters Marine Corps. The Marines in this unit provide career guidance to enlisted career Marines, performance evaluations on retention and retirement requests, and informational briefs to commands throughout the Marine Corps.

The unit also provides formal instruction on promotion and career progression to all academies, the Sergeants' Course, Career Course, Advanced Course, and Infantry Unit Leaders' Course. It conducts command visits at home and abroad, reaching more than 150,000 personnel per year.

### OFFICERS

The Marine Corps officer retention goal is to retain the best and most fully qualified officers in the right grades and with the right skills to provide the capabilities required in the operating forces. Historically, the aggregate officer retention rate has been 91.8 percent. For Fiscal Year 2012, we achieved a retention rate of 92.5 percent. Regardless of this great success, the Marine Corps continues to look for indicators of higher attrition in future years.

Overall, officer retention is excellent. Shortages do exist in certain grades and skills, but we are taking actions to properly shape the composition of the officer corps. To this end, the Marine Corps has both monetary and non-monetary programs in place. All of these programs provide incentives to officers for continued service while retaining Marine Corps flexibility to meet requirements across the Marine Corps Total Force.

### MARINE CORPS RESERVE

Reserve Marines understand the need to protect the American way of life. Dedicated men and women continue to volunteer to serve their country in the Marine Corps Reserve and share the sacrifices made by the Total Force in today's conflicts. The Marine Corps Reserve fills critical requirements supporting overseas contingency operations and the needs of combatant commanders worldwide. At home, Marine Forces Reserve (MARFORRES) maintains units and assets prepositioned throughout the country ready to assist not only national defense missions, but also civil-military

activities such as disaster relief.

Despite the current high operational tempo, the Marine Corps continues to meet its Reserve recruiting mission. New Marines and prior service Marines are accessed into our Reserve at a rate of approximately 25 percent of the Selected Reserve's end strength per year, providing continued capability to augment and reinforce the Active Component. The Reserve Officer Commissioning Program is enabling the Reserve Component to meet the demand for platoon leaders and company grade officers in our combat arms battalions. This program, combined with increased recruiting of all prior service officers and pilots through increased affiliation bonuses, inactive duty training travel, Active and Reserve Component transition opportunities, and primary military occupational specialty retraining, is providing the leadership needed in our Selected Marine Corps Reserve units.

The Marine Corps Reserve is a full partner in the Marine Corps Total Force. Reserve Marines continue to prove their dedication to their country and fellow citizens. Their honor, courage, and commitment to warfighting excellence, while maintaining close ties to their community, truly set them apart as "citizen soldiers." MARFORRES will continue to serve as an integral part of the Marine Corps Total Force in accomplishing its assigned mission as an expeditionary force in readiness.

### CIVILIAN MARINES

Civilian Marines are valuable assets to the Marine Corps Total Force team, providing critical support in numerous areas throughout the Corps. The Civilian Marine workforce totaled approximately 33,000 employees at the end of Fiscal Year 2012.

Civilian Marines work in true partnership with Marines and play an important role in current combat operations, research and development, and acquisition. They provide invaluable assistance, especially to





Marines returning from deployment and their families, as well as traditional services vital to base and station operations.

The Marine Corps is committed to having a civilian workforce equipped with the leadership skills and technical competencies necessary to meet all chal-

lenges, today and into the future. Through community management and career-development initiatives, Civilian Marines are able to remain a team of experts strategically integrated into the mission of the Corps. For instance, the Marine Corps Acculturation Program enables our civilians to learn and better understand their supporting roles, develop an appreciation of Marine Corps culture and history, and learn how their work fits into the Marine Corps mission.

The Marine Corps maintains relations with nine federal unions representing nearly 17,000 Civilian Marines. Guided by the Federal Service Labor-Management law, the Marine Corps supports a proactive labor relations program that manages strategies for effective communication, investigation, and establishment of work-life balance to create a more positive and effective workplace environment.



## SECTION 2: EDUCATION



## EDUCATION

### MARINE CORPS UNIVERSITY (MCU) AND PROFESSIONAL MILITARY EDUCATION (PME)

The MCU, also known as “Education Command,” oversees a series of schools that Marines attend progressively throughout their careers, regardless of military occupations. Incorporating pedagogical approaches common to any higher education institution, the combined doctoral-level and military faculty strives to foster critical thinking and decision-making skills through a balance of directed readings and writings, guest lectures, historical case studies, small-group discussions, military planning exercises, and shared experiences. The Commission of Colleges of the Southern Association of Colleges and Schools accredited the MCU.

MCU is the Professional Military Education (PME) advocate for the Marine Corps and is charged with developing, implementing and monitoring PME policies and programs and educating the force. The progressive PME learning system is designed to educate Marines by grade throughout their careers. PME programs consist of resident and nonresident instruction, professional self-study, and professional reading program. Resident programs present a unique learning opportunity in that they allow sister service, interagency, and foreign service students to participate in the education and exchange of ideas with Marine students. Nonresident programs are also critical to the education of the force, as a majority of the population must pursue education via distance education rather than resident instruction.

The main campus of MCU is located at Quantico, Virginia, and consists of the following officer PME schools and colleges: the Expeditionary Warfare School for captains; the Command and Staff College for majors; the School of Advanced Warfighting for second-year majors; and the Marine Corps War College for lieutenant colonels. The Senior Planner Course was first offered in 2010 for colonels, and a Reserve Of-

ficers Course was introduced in 2011 for lieutenant colonels and colonels. The Senior Planner Course also has included master/first master and master gunnery sergeants/sergeants major.

Enlisted resident education is conducted at the six regional Staff Noncommissioned Officer Academies worldwide that offer the Sergeants, Career, and Advanced Courses. The Senior Enlisted PME Course was first introduced in 2008 and is offered for master sergeants/first sergeants and master gunnery sergeants/sergeants major.

The MCU’s Lejeune Leadership Institute has assumed the mission of leadership development for civilian Marines. The Civilian Leadership Development Program (CDLP) will consist of a regionally delivered blended seminar-learning program.

The curricula of both the resident and nonresident education programs will continue to address Marine Air Ground Task Force proficiency in the core warfighting functions of combined arms, amphibious operations, and maritime prepositioning operations, in addition to developing and expanding the Corps irregular warfare and counterinsurgency capabilities. MCU is implementing the 35th Commandant Marine Corps Planning Guidance by further developing the University into a world-class institution and expanding opportunities for officer and enlisted PME.

Enlisted PME programs continue to be revised to ensure resident and nonresident programs are coordinated, relevant, and meet the needs of the operating forces. In 2011, the Marine Corps College of Distance Education and Training (CDET) began development of a new series of distance learning products for enlisted Marines. Leading Marines for lance corporals and the Advanced Course pre-work for gunnery sergeants can be taken on the Marine Distance Learning Network, MarineNet. The Corporals Course will open in 2012.

The CDET has successfully established Blended Seminar PME distance-education programs for the



Expeditionary Warfare School and the Command and Staff College. This innovative hybrid offering combines distance learning with short-duration residency periods in Quantico to expand course capacity beyond historical levels, making these courses more available to USMC, joint, interagency, and partner nation officers. Students in these programs interact with a truly diverse, international blend of peers and all participate in the resident schools' graduation ceremonies.

The Center for Middle East Studies has been joined by the Center for East Asian Studies, expanding MCU's strategic studies capacity. MCU will continue to broaden its regional coverage to research and publish on regional areas of significance to the Marine Corps and the Nation and on issues associated with strategic assessments, regional security, diplomacy, alliance relations, technological and military developments, and U.S. foreign policy. A major component of the centers will be outreach to other PME institutions, civilian academic programs, and research institutes.

MCU leadership is exploring a concept of establishing regional campuses to give the university the capacity to expand and engage the student population both onsite and online in worldwide educational environment. This will provide CDLP and PME to major bases and stations since a significant percentage of Marines complete their PME and CDLP via distance learning. By providing comprehensive and immediate access to MCU research and academic resources, students and faculty assemble and participate in a learning environment delivering courses with the use of technologies that link home campus with regional campuses and individual students to a greater extent than in the past. Regional campuses, nonresident courses, and blended seminars will permit a global education presence and centralized management of training and education resources. Through its combined emphasis on courses, symposia, and publications, MCU will continue to develop Marines, sister service members, interagency personnel, and multinational partners.

## COLLEGE OF DISTANCE EDUCATION AND TRAINING (CDET) DESCRIPTION

The Marine Corps Distance Learning Program (MCDLP) fielded the Marine Distance Learning Network, (MarineNet) in 1998 and is the Marine Corps learning management system and infrastructure that enables Marines to receive training and education via the appropriate interactive media, when and where the learning is needed. As an ACAT III Program managed by the College of Distance Education and Training (CDET) and Program Manager, Training Systems, the MCDLP provides the operational forces access to the distance learning resources and performance support tools that increases the effectiveness of training and education through use of technology. CDET is responsible for the design, development, and delivery of electronic training courses and products that meet vital Marine Corps training and educational requirements. CDET Professional Military Education (PME) programs provide the requisite PME for over 80% of all Marine officers (Chief Warrant Officer through Major). CDET enlisted PME programs, many currently in development, will impact all the Corps enlisted leaders (Lance Corporal through Gunnery Sergeant). MarineNet courseware facilitates career progression and expedites the training process by granting rapid online course enrollments and completions. Test scores are available immediately and students are able to print courseware completion certificates online. Student activity is electronically entered into the Marine Corps Total Force System via the Marine Corps Training Information Management System database providing promotion points, self education bonus points, and reserve retirement credits. To meet the access requirements of the operational forces, CDET has fielded 42 Learning Resource Centers (LRCs) to the major Marine Corps bases and stations.

Available electronic courseware products provide training and education for:

- Pre-Deployment
- Annual training requirements



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- Military occupational specialties
  - Culture and language
  - Professional military education (Officer and Enlisted)
  - Business skills and information technology courses

### OPERATIONAL IMPACT

MCDLP contributes to operational readiness by providing all Marines with immediate access to required pre-deployment training, military occupational specialty common skills training opportunities, and professional military education. Distance learning capabilities fill critical gaps in the training and education continuum and can reduce the amount of time Marines are required to be away from their home duty station attending formal training. MCDLP gives the commander a better-trained Marine while increasing personnel availability.

### PROGRAM STATUS

Throughout the Marine Corps, 42 LRCs have been fielded and are currently operational.



# PILLAR 2: UNIT READINESS



# SECTION 1: KEEPING FAITH WITH MARINES, SAILORS, AND THEIR FAMILIES





## INTRODUCTION

We expect and require extraordinary loyalty from our Marines and Sailors—loyalty to country, family, and Corps. Our Nation has been at war more than a decade, placing unprecedented burdens on Marines, Sailors, families, Wounded Warriors, and the families of the fallen. They have all made tremendous sacrifices, many in the face of danger; we owe our complete loyalty back to them all.

We will work to ensure the critical needs of our families are met during times of deployment and in garrison by providing the services, facilities and programs to develop the strength and skills needed to thrive while facing the challenges of operational tempo. If wounded, injured or ill (WII), we will seek out every available resource to restore Marines to health. We will enable the return to active duty for those seeking it. For those unable to do so, we will responsibly transition them to civilian life. We will support and protect the spouses and families of our wounded and those of our fallen Marines. There are several areas and programs central to our tenet of “keeping faith with Marines, Sailors and their families.”



## DEFENSE READINESS REPORTING SYSTEM – MARINE CORPS (DRRS-MC)

### DESCRIPTION

The DRRS is the next-generation Marine Corps authoritative data systems for force readiness reporting. The Marine Corps began development of DRRS-MC in April 2009 to function as part of the DRRS Enterprise (DRRS-E), a collection of approved hardware and software components culminating in a DoD-wide web-based user interface. Similar to DRRS-Army and DRRS Navy, DRRS-MC merges resource-based (personnel, equipment supply, equipment condition, training) and Mission Essential Task (MET)-based reporting to simplify the readiness reporting process. DRRS-MC has been a relatively low-cost, high-dividend investment that has had a positive impact on the ability of Marine commanders to assess the operational readiness of their units.

### OPERATIONAL IMPACT

DRRS-MC supports the Five Pillars of Institutional Readiness construct by allowing Marine commanders to accurately and efficiently report the readiness of their units to Headquarters Marine Corps (HQMC). The goal is to simplify and expedite the reporting process by using streamlined information flow that begins and ends with an intuitive web-based interface. DRRS-MC allows commanders to report unit readiness in terms of resources, ability to conduct METs, and overall readiness to execute a unit's core mission



and its assigned missions. DRRS-MC allows users to view current and historical readiness information using graphical user interface screens to efficiently display readiness information. DRRS-MC is designed as an executive information system that begins at a summary level and allows a “drill-down” view capability to access detailed readiness information.

### PROGRAM STATUS

The Marine Corps went “live” with DRRS-MC on April 30, 2010 with the fielding of the Net-centric User Status Report application. This application enabled unit commanders to submit readiness reports containing both resource data and mission assessments. The DRRS-MC business intelligence tool, the Marine Readiness Management Output Tool, was fielded at the end of FY 2010 and enables Marine Expeditionary Forces, Marine Corps Forces (MARFORs), and HQMC to assess force readiness with greater clarity. The DRRS-MC business intelligence tool is undergoing a significant series of functional enhancements to further meet requirements of the user community. In November 2012, the USMC fielded an Enterprise Messaging web-service capability in DRRS-MC, allowing USMC Mission Assessments and Resource data to be consumed by the DRRS-E. This new capability enables senior DoD leadership, including Combatant Commanders, to view and consume USMC readiness data. DRRS-MC is expected to reach full operational capability in FY 2014.

## MEDICAL READINESS REPORTING SYSTEM (MRRS)

### DESCRIPTION

The MRRS is the Individual Medical Readiness (IMR) reporting system for the Marine Corps. MRRS effectively standardizes the reporting of IMR and deployment health. It collects, tracks, and reports individual medical/dental readiness for both the

active and reserve components, ensuring the Marine Corps meets Department of Defense and Congressional requirements. MRRS is a low-cost, high-dividend investment that has had a positive impact on the ability of Marine commanders to assess the medical readiness of their units.

### OPERATIONAL IMPACT

Medical readiness reporting is the responsibility of the commander. MRRS allows Marine commanders to accurately and efficiently report the medical readiness of their units. With MRRS, IMR reporting has become institutionalized. Data is updated in real time, allowing commanders to gain immediate awareness on the deployment health status of their units, down to the individual Marine. In addition to tracking unit and individual medical readiness, the capability exists within MRRS to track Marines and Sailors who have been diagnosed with Traumatic Brain Injury (TBI) – and those who have experienced concussive events that may produce TBI – from their “point of injury” to “return to full duty.” This will give commanders the ability to monitor the status of a Marine who has suffered a concussive event, in combat or at home station, and if necessary, ensure that Marine is referred to the appropriate health care provider. A similar application has been developed for Post Traumatic Stress Disorder.

### PROGRAM STATUS

MRRS has been operational since 2006. The USMC continues to make minor enhancements to MRRS to meet service, Joint and the Office of the Secretary of Defense requirements for Unit Medical Readiness visibility and IMR reporting.

## FAMILY SUPPORT PROGRAMS



While we recruit Marines, we retain families. The readiness of our families is directly linked to the readiness of our Corps. Because almost 50 percent of our Marines are married, investment in our families is critical to the long-term health of our Corps. For our active duty population, we have almost 90,000 spouses, more than 117,000 children, and approximately 280 dependent parents and other dependents. The Marine Corps is a young force, with 61 percent being 25 years old or younger. Almost 39 percent of our enlisted force is between the ranks of private and lance corporal (pay grades E-1 to E-3), and almost 62 percent of Marines are on their first enlistment. Our personal and family readiness planning carefully considers these demographics.

The Marine Corps is committed to providing Marines and their families with a comprehensive and effective support system. Periods of increased utilization are expected both during the existing wartime mission and as Marines return to garrison life and reunite with



families. Effective strategic communications on changing benefits will be essential to ensure complete transparency and opportunity for families to adjust their individual family plans while maintaining a consistent quality of life.

Our **Family Readiness Programs** strengthen and fortify Marines and families by providing official unit communications, readiness preparedness training, information on and referral to qualified helping professionals, and vital unit/installation/community connection. Just as our Marines are required to be in a constant state of readiness, so must our Marine families. We know that in order to develop, maintain, and sustain their personal and family readiness and resiliency, we must provide innovative programs and services that are timely and relevant. Technology enablers such as e-Marine and Marine On-line have been incorporated into the family readiness program to keep Marines and family members apprised of events. Well-trained and equipped Family Readiness Officers act as a critical program connector. They actively seek partnerships with other helping professionals and leverage family member volunteers to support the unit, personal and family readiness mission.

Our **Family Care Program** utilizes integrated capabilities that support the care and development of Marine Corps children from birth to age 18 and

family members with disabilities. These programs—Child, Youth and Teen Program (CYTP), Exceptional Family Member Program (EFMP) and the School Liaison Programs — attend to both typical and unique family needs that may challenge the resiliency, health, education, and overall well-being of our Marine Corps children.

CYTP supports families in balancing the demands of meeting mission requirements and parental responsibilities by offering families quality, affordable, accessible child care and youth and teen recreation programs. Services may be located on or off the installation and respond to the full-day, part-day and hourly needs of Marine Corps families. CYTP strives to deliver standardized, consistent, predictable programs across all installations thereby reducing the stress of the military lifestyle on children, youth and teens. EFMP improves the quality of life for families that support a member with a disability. EFMP ensures that Marines are assigned to duty stations where the required support and services are available. This allows the Marine to focus on the mission, benefiting the Marine's unit and career progression. Our School Liaison Programs provide the critical link between commanders, communities, schools, and families of military school-age children to provide clarity and direction that is vital to assure all stakeholders operate cohesively in a standardized manner.

## INTEGRATED BEHAVIORAL HEALTH

Marines continue to make significant contributions to the war effort around the globe. After more than a decade of sustained conflict, many are experiencing considerable stress from multiple deployment cycles, the rigors of combat, high operational tempos, and the anxieties of separation. Marines, Sailors, and their families continue to receive access to high quality, comprehensive behavioral health services. The Behavioral Health Program seeks to maximize

resources to improve access to quality behavioral health care services.

The Behavioral Health Program provides resources to address the concerns facing Marines, Sailors, and their families today including new parent support, life and relationship skills, interventions for family violence, combat and operational stress control, suicide prevention, and substance abuse prevention. In addition, the Behavioral Health Program is increasing the number of trained behavioral health personnel available to provide counseling services and treatment.

Sustaining the wellness and optimal functioning of Marines, Sailors, and their families remains the top priority of the Marine Corps. To succeed in this endeavor our Behavioral Health Program is empowering leaders through training and awareness programs that strategically target common behavioral health risk and protective factors and whose goal is earlier prevention and intervention. The recent development of Marine Total Fitness, a unifying framework that promotes a holistic view of health including mind, body, social, and spiritual elements, helps to guide the development of wellness. The efforts of the Behavioral Health Program and engaged leadership enhances unit, personal and family readiness.

## SEXUAL ASSAULT PREVENTION AND RESPONSE

Sexual assault is a crime that is incompatible with Marine Corps values of honor, courage, and commitment. Not only does it undermine mission readiness and unit cohesion, sexual assault results in an irrevocable loss of faith in the institution and violates the basic principles every Marine has vowed to defend.

Tasked with determining how best to stop this “aberration” within the Corps, the Commandant’s hand-selected Operational Planning Team devised the 2012 Sexual Assault Prevention and Response (SAPR) Campaign Plan to reinvigorate the existing SAPR program through the implementation of new prevention and

victim care initiatives. Large-scale Marine Corps-wide training initiatives were implemented utilizing a top-down leadership model, in order that the impact of sexual assault and its overarching effects on the Corps were clearly understood by all. Commanders and their senior enlisted leaders will continue to establish an environment that is non-permissive to any misconduct, especially the crime of sexual assault. But the duty of preventing sexual assault belongs inherently to Marines of every rank.

The SAPR Program remains steadfast in its commitment to victim care. Response systems have been strengthened through advocacy training and have heightened focus on world class victim care. The Marine Corps remains focused in its commitment to ensuring all victims of sexual assault receive supportive services that preserve their dignity and safety. In addition to the successful implementation of these initiatives, SAPR recognizes that sexual assault remains an underreported crime. We will continue to reinforce our prevention and response efforts, while holding fast to the fact that one instance of sexual assault is one too many.

## WOUNDED WARRIOR REGIMENT (WWR)

Through our Wounded Warrior Regiment (WWR), the Marine Corps will continue to provide non-medical care to honor the sacrifices of our Nation’s wounded, ill, and injured (WII) Marines and their family members. WII Marines are highly resilient. Whether they return to full duty or resume their lives in their civilian communities, they are remarkable individuals whose hard-won experiences are highly valuable to our Nation. The Marine Corps believes that WII Marines’ best days are not behind them, but are still to come. The WWR supports WII Marines and families to ensure that this belief is realized.

In caring for WII Marines and their families, the WWR has confirmed that their needs are varied and





highly dependent upon many factors, including the acuity of the Marine's wound, illness, or injury; his or her family support system; and the phase and location of recovery. WII Marines and their families are a highly unique population and must receive programs and services commensurate with their particular situation. For the Marine Corps, care for WII Marines is not a process; it is a relationship.

Headquartered at Marine Corps Base Quantico, the WWR is a military command with detachments around the globe to ensure care is provided when and where it is needed. The Marine Corps makes no distinction for the purposes of providing care. Marines wounded in combat, Marines injured in the line of duty, and Marines who fall ill, may all benefit from the WWR's comprehensive non-medical care. This non-medical care is provided in many ways, to include preparing and executing recovery plans, disability evaluation system advocacy, liaison to the medical community (including behavioral health), resource and information referral, navigating pay and entitlements, and community reintegration.

Marines do not need to be assigned to the WWR to receive care and support. Under the Marine Corps care construct, only the most medically acute cases are joined to a regimental element. When joined, these WII Marines and their families benefit from high-touch recovery oversight via multi-disciplinary teams consisting of medical and non-medical experts who regularly confer to ensure a holistic recovery. WII Marines whose medical conditions do not trigger assign-

ment to a regimental element are also supported by the WWR's non-medical recovery care experts and programs and services. The WWR also supports Marine Commanders by providing them with the information and resources they need to care for their WII Marines.

The Marine Corps has pledged to "keep faith" with those who have served. The WWR is a fundamental component of this pledge. Whether we are a Nation at war or in times of peace, the WWR will continue to successfully meet the advocacy, non-medical support, and care coordination needs of WII Marines and their families.

## SEMPER FIT AND RECREATION / EXCHANGE SERVICES

The Marine Corps Total Fitness Campaign is supported through partnership with the Semper Fit and Exchange Services programs. These programs are aligned to support the social and physical cords of Marine Total Fitness, to sustain a high quality of life and community health, and to enhance the Marine Corps mission, focus, and readiness.

Highlights of significant 2012 initiatives include the High Intensity Tactical Training (HITT) program, a comprehensive strength and conditioning program specific to optimizing physical performance and combat readiness for all active duty and reserve Marines. HITT takes functional fitness and strength and conditioning to the next level for the Corps. Aquatic Cadence and Reconditioning is another program unveiled in 2012. Currently operating at 15 pools around the Marine Corps, this program is focused on pool running and workouts lasting 20 to 60 minutes. The workouts are low-impact and easier on joints than running on a road. The program has been getting positive reviews from Marines who find it to be even more challenging than the more traditional workout.

The "For the Leathernecks" Comedy and Entertainment tour is a unique event which brings comedians and musicians on-installation to perform free of



charge and has been popular with Marines and Sailors. These shows build esprit de corps and unit cohesion to support the Marine Corps Total Fitness strategies. In 2012, the “For the Leathernecks” tour reached over 10,000 single Marines, many of which recently returned from a deployment or training exercise. Approximately 24 more shows across the Marine Corps are scheduled for 2013.

Operation Adrenaline Rush (OAR), currently offered at Marine Corps Air Station (MCAS) Yuma and Camp Lejeune, assists Marines in reintegration after deployment by empowering small unit leaders, maintaining combat readiness, and reinforcing unit cohesion through high adventure, outdoor activities like white water rafting or rock climbing. There are plans to expand OAR to several other installations in 2013.

Special congratulations go to two other Marine Corps special activities — the All-Marine Boxing and Rugby teams — that won their respective Armed Forces Championships in 2012.

Marine Corps Community Services Business Operations provide lifestyle relevant products and services below market price, which Marines and families need and desire to support household and financial health both in garrison and while deployed. In 2012, the Marine Corps Exchange (MCX) celebrated its 115th anniversary. It has come a long way since 1897 and remains steadfast in its support of Marines, Sailors, and families. The MCX continues to support the Commandant’s priority of “keeping faith with Marines and families” by providing a quality, relevant, and accessible benefit. In 2012, we made important infrastructure improvements; several new and renovated branded Exchanges opened, including at Twentynine Palms, Henderson Hall, Camp Lejeune, and Camp Pendleton. The MCX remains conscious of the changing needs of Marines and families while seeking efficiencies and implementing best business practices. With MCX, Marines and their families can rely upon a high quality product, at a fair, competitive price, and know that the proceeds are invested in their community, creating a stronger Marine Corps and enhancing overall community health.

## PERSONAL AND PROFESSIONAL DEVELOPMENT PROGRAM

As our Nation’s force in readiness, Marines stand combat-ready. The Commandant is committed to ensuring they also stand transition-ready through a Personal and Professional Development Program that will be integrated into Marines’ careers. The Marine Corps is transforming its transition assistance so that it engages Marines throughout their military careers. Marines will develop long-term education and career goals and will be equipped with the skills needed to successfully reintegrate into civilian life. Our first phase revolutionized our Transition Readiness Seminar, which now contains both core and pathway content that tailors a Marine’s transition to his or her goals while meeting specific transition readiness standards. Our next phase will enhance outreach to those who require localized support through our Marine for Life Program and its Marine for Life representatives that will help Marines develop and maintain local networks of Marine-friendly individuals, employers, and organizations. Our Personal and Professional Development Program will also focus on spouse employment and effective financial management strategies.

This approach positions the Marine Corps to better support Marines and families during their military service and while they prepare for their eventual reintegration into civilian life. Transition will no longer be a culminating event to a Marine’s service, rather it will become a vital part of a Marine’s continuous personal and professional development from recruit to veteran. Whether they choose to be reservists, students, business owners, or employees, our Marines and their families will return as quality citizens with a plan for success.

## SECTION 2: EQUIPPING THE MARINE



## INTRODUCTION

The *Individual Marine* is the heart and soul of the Nation's Marine Corps. The Individual Marine is trained, educated, and equipped to operate across the broadest spectrum of missions and tasks — a “middleweight” fighter optimized for crisis response but equally capable in global engagement, irregular warfare, or responding to larger threats worldwide.

Marine ground combat forces will be staffed with disciplined, highly trained, well-educated, and superbly led Marines who thrive in uncertainty, exploit chaos, solve complex problems through simple means, and take prudent, ethical, and decisive action. These Marines will be armed with superior weapons and equipment that enhance shared understanding of the battlespace and enable rapid, coordinated action — all without overburdening the Individual Marine or compromising our expeditionary agility.

Today's Marines are operating superbly in every clime and place. The Marine Corps leadership has an obligation to their Marines, their families, and the Nation to be prepared for tomorrow with an eye to lightening the current fighting load. While a Marine's focus in the field is on excellence and mission accomplishment, the focus of Marine Corps programs is on the “tools” needed for operational success. America's Marines deserve nothing but the best that the Nation can afford.



## M27 INFANTRY AUTOMATIC RIFLE (IAR)



### DESCRIPTION

The IAR significantly enhances the automatic rifleman's maneuverability and displacement speed, while also providing the ability to suppress or destroy targets of most immediate concern to the fire team.

### OPERATIONAL IMPACT

The automatic rifle will significantly enhance the automatic rifleman's maneuverability and displacement speed, while also providing the ability to suppress or destroy targets of most immediate concern to the fire team.

### PROGRAM STATUS

Following the Milestone C decision in 2009, the IAR underwent a Limited User Evaluation (LUE) with participation by three *Operation Enduring Freedom* active-duty infantry battalions, a reserve infantry battalion, and an active-duty light armored reconnaissance battalion. The LUE assessment collection included a post-workup assessments and a 100-day deployment assessment. Due to positive feedback from the deployed units, the Commandant of the Marine Corps terminated the Limited User Evaluation in favor of a Full-Rate Production Decision in third quarter of FY 2011. A Fielding Decision was achieved and fielding began in second quarter FY 2012. Initial Operational Capability was achieved third quarter FY 2012 and Full Operational Capability is scheduled for second quarter FY 2013. The full AAO has been purchased.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
Heckler & Koch, Ashburn, VA

## MARINE EXPEDITIONARY RIFLE SQUAD (MERS)



### DESCRIPTION

The MERS is responsible for the Squad as a System. The focus is on the Marine as a human and everything worn, carried and consumed by the squad as a capability provider. MERS is the steward of the Marine rifle squad's suite of equipment and works with all the program managers at Marine Corps Systems Command to optimize and integrate the rifle squad's equipment. The program has founded the Gruntworks Squad Integration Facility located on Camp Barrett at The Basic School. The facility provides a venue to engineer, evaluate, and refine the capabilities and limitations of all equipment in development and under consideration for procurement that will be delivered to the infantry squad. This dynamic facility uses a human factors lab, equipment prototyping and modification workshop, a mobility platform integration area, and an Operational Environment Simulator focused on equipment evaluation in order to accomplish equipment modernization and integration initiatives. Human Systems

Integration and ergonomics are applied to the physical integration of the infantry squad's equipment.

### OPERATIONAL IMPACT

Ergonomic solutions coupled with weight, stiffness and bulk reductions enhance the mobility of the squad while providing simple, reliable, and trainable integrated equipment solutions.

### PROGRAM STATUS

Integration efforts during 2013 include:

- Metric for mobility of Marines utilizing the Marine Corps Load Effects Assessment Program (MC-LEAP)
- Integration of the Joint Battle Command – Platform (JBC-P) into the Marine rifle squad
- Improvements in the weight distribution and load carriage methodology within the squad using metrics for mobility
- Infantry weapon as a system ergonomic enhancements
- Thermal strain and physiological studies in the operational environment
- Research into efficient power generation and power/data distribution on the Marine
- Integration and anthropometry of the Marine in mobility platforms under development such as Joint Light Tactical Vehicle, Amphibious Combat Vehicle, and Marine Personnel Carrier
- Integration of the various unique items carried in the billet positions within the squad

## FAMILY OF BALLISTIC PROTECTION SYSTEMS (FBPS)



### DESCRIPTION

The Marine Corps (FBPS) is comprised of critical individual armor systems that save lives, reduce the severity of combat injuries, and increase combat effectiveness. It also provides Marines with the ability to adapt their armor load to address the tactical situation. FBPS includes the latest in personal protective equipment and load-bearing equipment, including the following: Improved Modular Tactical Vest (IMTV), Plate Carrier (PC); Full Spectrum Battle Equipment (FSBE); Body Armor System Combat Vehicle Crewman; Light Weight Helmet (LWH); Protective Undergarment (PUG); Protective Over Garment (POG); Enhanced Combat Helmet (ECH); and Improved Ballistic Eye-wear (IBE).

In February 2007, the Marine Corps transitioned to the Modular Tactical Vest (MTV) for troops deployed in Overseas Contingency Operations. The MTV provided improved load carriage, fighting load integration, and emergency release capability over the legacy Outer Tactical Vest. In response to MTV design deficiencies identified during field use, the program office developed the IMTV. The IMTV improved armor and fighting load integration, resulting in increased mobility and lethality while reducing system complexity and overall weight in comparison with the MTV. Initial fielding was initiated during the first quarter of FY 2012.



The Scalable Plate Carrier (SPC) was issued as an additional ballistic vest for Marines operating in jungle environments and the mountainous regions of Afghanistan, beginning in 2008. The SPC provides an option for commanders to address certain mission and threat requirements. Compared to the MTV, the SPC allows for greater individual maneuverability, agility, and mobility with reduced thermal stress in jungle and hot mountainous environments. The SPC is intended to address a predominantly direct fire threat and offers the same level of ballistic performance as the MTV. The system reduces overall weight by minimizing the soft armor required beyond that needed to address the direct-fire threat. The SPC is being replaced with the Plate Carrier (PC).

The USMC PC is now the Marine Corps armor Program of Record. The PC is a government-developed design that improves shoulder comfort, improves load carriage, incorporates an emergency release capability when compared to the SPC, and shares 95 percent commonality with the IMTV.

The FSBE provides a tailorable suite of torso and headborne ballistic protection, short-duration underwater breathing capability, flotation, and limited load carriage to meet the specific mission profiles required by the Marine Corps Special Mission communities.

The Tier 1 PUG was developed to protect the skin from the effects of sand and small debris used in Improved Explosive Devices. There are two phases to this effort. The first phase, which began initial fielding during the first quarter of FY 2012, provides an immediate solution in support of Marines in Afghanistan. The second phase calls for exploring and the development of new protection systems for the lower extremities. To facilitate this effort, a Pelvic Protection working group has been assembled under the Natick Soldier Research Development and Engineering Center. The working group coordinates Army and Marine Corps efforts that explore more effective and less restrictive solutions to reduce the lower extremity casualties suffered by Marines and Soldiers.

The Tier 2 POG was developed to provide increased coverage to the pelvic region against high velocity fragmentation. There are two phases to this effort. The first phase provided an immediate solution in support of Marines in Afghanistan. Initial fielding of the POG was initiated during the first quarter of FY 2012. The second phase calls for the development of new protection systems for the lower extremities that integrate with the final Tier 1 PUG design. Marine Corps Systems Command is working with the Office of Naval Research and the Naval Research Laboratory as well as the Army to develop more effective and less restrictive solutions to reduce the lower extremity casualties being suffered by Marines and Soldiers.

In addition to body armor, Product Manager, Infantry Combat Equipment (PdM ICE) also procures the current LWH and Modular Integrated Communications Helmet (MICH). The LWH and MICH are the helmets that have been used by Marines during overseas contingencies since 2004.

Starting in 2009, Enhanced Combat Helmet (ECH) has been in development. Developmental testing has shown the ECH has resistance to select small arms penetration and superior fragmentation protection at the same weight of presently fielded helmets. The ECH is a protective helmet consisting of a ballistic protective shell, pad suspension system, four-point retention system, reversible helmet cover, night vision goggle bracket, and attachment hardware. The ECH shell has the shape of the Army's Advanced Combat Helmet for improved field of view, sound localization, and equipment integration.

The Improved Ballistic Eyewear (IBE) has replaced the Military Eyewear Protection System (MEPS) Eye Safety Systems (ESS) ICE spectacle. The IBE is designed to protect Marines against sun, wind, dust, and ballistic hazards that are common on the battlefield. The IBE is fielded as a system, one spectacle and one goggle.

### OPERATIONAL IMPACT

The FBPS allows the incremental enhancement of individual components within the program as technological improvements become available, while ensuring integration with fielding and developing Personal Protective Equipment (PPE). Working closely with the U.S. Army, with whom the USMC shares ballistic performance requirements and testing standards, the Marine Corps is fielding tested PPE tailored to the dynamic operational environment.

### PROGRAM STATUS

The FBPS is equipping the operating forces with technologically advanced and highly effective PPE. As technology advances, there is a continuous upgrade and replacement of personal protective systems based on battlefield comments and threat information. The Marine Corps is already developing the concept and armor behind the Modular Scalable Protection System which will integrate armor requirements into one system that will include iterative product improvement and additions.

Procurement Profile:	FY 13	FY 14
Quantity:		
ECH	77,000	0
PC	55,882	41,947
PUG	183,600	0
NEXTGENSAPI PLATE	30,000	0

#### Developer/Manufacturer:

ECH: Ceradyne, Inc., Costa Mesa, California

FSBE: The Resource Center, Jamestown, New York

IBE: Eye Safety Systems, Inc. (ESS), Foothill Ranch, California

IMTV: Carter Enterprises, Brooklyn, NY and KDH, Eden, North Carolina

PC: Carter Enterprises, Brooklyn, NY; KDH, Eden, NC;

Ibiley Manufacturing, Miami, Florida

POG: Hawk Protection, Inc., Pembroke Pines, Florida

PUG: Armorworks, Chandler, Arizona

LWH: BAE Systems, Jessup, Pennsylvania

### CLOTHING AND FLAME RESISTANT ORGANIZATIONAL GEAR (FROG)

#### DESCRIPTION



In February 2007, the Marine Corps began fielding FROG – including gloves, balaclava, long-sleeved under-shirt, combat shirt, and combat trousers — to all deployed and deploying Marines. As part of this effort, the Marine Corps recently added the Increment Weather Combat Shirt (IWCS) to the FROG capability set. This pullover shirt is designed to be worn with body armor and provide protection against the effects of adverse weather conditions such as rain, wind,

and snow while maintaining the current level of flame-resistant protection. A product-improvement initiative is underway in response to durability deficiencies experienced in Afghanistan and to improve integration through design changes. In addition, the requirement for Woodland Marine Pattern FROG combat shirt, trouser and IWCS are required to provide improved camouflage and concealment in areas with green vegetation.

#### OPERATIONAL IMPACT

This lifesaving ensemble of flame-resistant clothing items mitigates flash-flame exposure injuries caused by Improvised Explosive Devices. The Marine Corps continues development of FROG to reduce weight, increase comfort, improve durability, and increase flame-resistant properties.

#### PROGRAM STATUS

The FROG ensemble is post Milestone C and is being fielded.

Procurement Profile:            FY 13            FY 14  
 Quantity:  
 Woodland Sets            35,000    15,000

**Developer/Manufacturer:**

FRGloves: Camelback, Petaluma, CA; Botach Tactical, Los Angeles, CA; Promotion Plus Inc, North Royalton, OH

Combat shirt and Trouser: Propper ECommerce Inc, Weldon Spring, MO; Provengo LLC, Oceanside, NY

Inclement Weather Combat Shirt: Short Bark Industries, Vonore, TN

Mid-weight Balaclava: Southeastern Rehabilitation, Corbin, KY

Lightweight Balaclava: Dawn Enterprises, Inc, Blackfoot, ID

LSt-shirts: Peckham Vocational Industries, Lansing, MI

**FAMILY OF MOUNTAIN COLD WEATHER CLOTHING AND EQUIPMENT (FMCWCE)**

**DESCRIPTION**

The purpose of the Mountain Cold Weather Clothing and Equipment Program (MCWCP) is to increase the survivability, mobility, and lethality of Marines in mountainous and cold-weather environments, at altitudes in excess of 15,000 feet, and at temperatures that fall as low as -25 degrees Fahrenheit. Clothing and equipment addressed by the FMCWCE include skis, snowshoes, cold-weather hydration systems, sleeping systems, climbing equipment, mobility enhancement equipment, cold-weather clothing systems, and cold-weather footwear.

In September 2008, the Marine Corps identified a need to provide a smaller and lighter sleep system to replace the Modular Sleep System (MSS). The Three-Season Sleep System (3S) leverages technological advances in textiles and insulation to increase environ-

mental protection while reducing weight and volume compared to the previous sleeping bag. The 3S, when incorporated with the layered clothing system Marines already carry, provides 15 degrees of greater protection, is one pound lighter, and is eight percent smaller by volume than the MSS patrol bag. The 3S is designed for 20 degrees with lightweight insulating layers and as low as 10 degrees when wearing recommended MCWCP insulating clothing layers.. The 3S increases mobility and survivability by permitting Marines to operate across a greater temperature range than could be achieved with the previous MSS.

The 3S is being fielded. In FY 2012, the Marine Corps will address temperatures between 10 and -20 degrees with the Extreme Cold Weather Bag (ExCWB).

The FMCWCE also encompasses the Mountain Cold Weather Clothing Program (MCWCP), which consists of the following:

- Lightweight Exposure Suit (Parka and Trousers)
- Extreme Cold Weather Parka, Trouser, and Bootie
- Snow Camouflage Parka, Trousers and Pack Cover
- Extreme Cold Weather Mitten System (a mitten shell with liner and light-duty flame-resistant glove insert)
- Windpro Fleece Jacket
- Flame-Resistant Silkweight Underwear
- Flame-Resistant Midweight Underwear.

The MCWCP is in the operations and support phase.

**OPERATIONAL IMPACT**

The FMCWCE allows Marines to operate in every climate and place by providing the clothing and equipment required to survive in harsh mountain cold weather environments. The program drives innovation and improvement in the commercial market, which leads to lighter weight and higher performing clothing and equipment for the warfighter.

## PROGRAM STATUS

Many of the programs within the FMCWCE are post-Milestone C and are either being fielded or sustained. The ExCWB will be a new effort in FY 2012.

Procurement Profile:	FY 13	FY 14
Quantity:		
ExCWB	20,332	105,000
Folding Mat	22,222	37,072
All Purpose Liner	26,000	58,798
Ski System	0	1,203

Developer/Manufacturer:

ExCWB: NISH: Readyone Industries, El Paso, TX

Ski System: NISH: Pioneer Adult Rehab Center (PARC), Clearfield, UT

Folding Mat: NISH: Pioneer Vocational/Industrial Services Inc., Danville, KY

All Purpose Liner: NIB: Industries for the Blind, Winston Salem, NC

equipped with image-intensified night-vision devices, thus improving situational awareness and facilitating control of organic weapon fire. As recently as early 2012, Marines have had to carry two separate devices to satisfy the requirement for thermal imaging in weapon-mounted and hand-held configurations. The fielding of one device that is optimized to function in both modes leads to an overall weight-savings for the individual Marine and also reduces the logistical burden and support.

## PROGRAM STATUS

The STS program will attain Initial Operational Capability during FY 2014 and Full Operational Capability during FY 2015.

Procurement Profile:	FY 13	FY 14
Quantity:	25	863

Developer/Manufacturer:

TBD

## SQUAD THERMAL SIGHT (STS)

### DESCRIPTION

The STS will be a lightweight thermal imager that can be used in the handheld mode or in the weapon-mounted, clip-on mode that is compatible with the AN/PVQ-31 Rifle Combat Optic, the magnified day optic used on the M16A4 service rifle, and M4 carbine. The STS will have an integrated Class 3B infrared (IR) laser pointer with two modes of operation: training (eye-safe) and tactical (non-eye safe). The IR pointer will assist in target designation when used with image-intensification night-vision devices.

### OPERATIONAL IMPACT

The STS will better enable Marines to detect and recognize potential targets, danger areas, and items of interest in low light as well as all other lighting conditions. The integrated laser pointer will allow Marines to designate potential threats to other team members

## ROUTE RECONNAISSANCE AND CLEARANCE (R2C) FAMILY OF SYSTEMS

### DESCRIPTION

The R2C capability set mitigates the threat of mines, improvised explosive devices (IEDs) and obstacles along routes in Marine Air Ground Task Force areas of operation. R2C units can perform standoff detection, interrogation, marking, and clearance of explosive and non-explosive obstacles in order to ensure the mobility of friendly forces. In addition, it provides a rapidly employable set capable of performing route reconnaissance to obtain information about key terrain features, route conditions, and obstacles along specific routes. The R2C set will reside in Combat Engineer Battalions (CEB). First and Second CEBs will be assigned three sets each.





**OPERATIONAL IMPACT**

This mobility capability is essential for maintaining access, shaping the battlespace, establishing the initiative, positioning forces, and supporting dispersed forces. This capability ensures maneuver and sustainment forces reach their objectives when subject to attack by the variety of explosive weapons and ambushes characteristic of irregular warfare. It provides warfighter and system survivability against asymmetric threats. R2C operations also enable the effective execution of the stability operations tasks of initial humanitarian assistance, limited governance, restoration of essential public services, and other reconstruction assistance by providing access and protection to the executing forces and agencies and gathers geospatial information vital for mobility planning.

**PROGRAM STATUS**

The Increment I Capability Production Document (CPD) was approved by the Marine Requirements Oversight Council in August 2009. Increment I consists of procuring light weight mine rollers, robots, vehicle mounted mine detectors, and light weight route clearance blades. The Increment II CPD was approved in July 2011. Increment II consists of rebuilding CATEGORY I, II, and III Mine Resistant Ambush Protected (MRAP) vehicles, adding an interrogation arm and Vehicle Optic Sensor System (VOSS) onto CAT II Mine Resistant Ambush Protected (MRAPS), and procurement of the ENFIRE automated route reconnaissance kits. Increment III requirements documents are planned for signature in 2013. Increment III will add emerging R2C capabilities to the Family of Systems.

<b>Procurement Profile:</b>	<b>FY 13</b>	<b>FY 14</b>
<b>Quantity:</b>		
<b>Blades</b>	<b>46</b>	<b>0</b>
<b>Robots</b>	<b>46</b>	<b>0</b>
<b>ENFIRE</b>	<b>23</b>	<b>0</b>

**Developer/Manufacturer:**

The R2C Family of Systems uses products from multiple vendors and government agencies, with the largest being Force Protection Industries, Inc. (FPII), Charleston, SC, and General Dynamics Land Systems, Sterling Heights, MI.



## **SECTION 3: INVESTING IN THE EDUCATION AND TRAINING OF OUR MARINES**



## INTRODUCTION

We will maintain professional military education and training programs that prepare Marines for the stress of combat operations and equip them with the skills to meet the challenges of life as a Marine. Founded on our core values, our education and training curricula strengthen individual resilience and support a wide range of operational capabilities. We are leveraging competencies in entry-level and skills-progression training, and re-emphasizing core competencies in combined arms and amphibious operations. Future training will also center on the MAGTF Training Program, which will develop the essential unit capabilities to conduct integrated operations. We are transforming the Marine Corps University into a world-class institution and are widening opportunities in career-level schools for our company-grade officers. We are likewise increasing enlisted resident courses and are adding more distance-education learning opportunities and requirements, especially at the junior enlisted and non-commissioned officer level.

## TRAINING AND EDUCATION COMMAND (TECOM)

Located in Quantico, VA, TECOM is a key component of Marine Corps Combat Development Command (MCCDC). TECOM is tasked with the development, coordination, resourcing, execution, and evaluation of training and education concepts, policies, plans, and programs to ensure Marines are prepared to meet the challenges of present and future operational environments. The major subordinate commands within TECOM that carry out this mission are described below.



### MARINE CORPS RECRUIT DEPOTS (MCRDs) PARRIS ISLAND, SOUTH CAROLINA AND SAN DIEGO, CALIFORNIA

The Marine Corps Recruit Depots (MCRDs) are responsible for basic training also known as “Boot Camp.” This process, in which recruits are cut off from the civilian world and inducted into Marine Corps lifestyle, is conducted over a 13 week period. Upon completion, recruits earn the title “Marine” and then move on to additional combat or other military occupational specialty training.

### TRAINING COMMAND (TRNGCMD)

Located in Quantico, VA, TRNGCMD is the Marine Corps proponent for military occupational specialty individual-skill training. TRNGCMD analyzes, designs, develops, resources, implements, and evaluates standards-based individual training in order to provide combat capable Marines to the operating forces. TRNGCMD accomplishes its mission by exercising command over each of the Marine Corps formal schools, Marine Corps detachments at other Services’ bases, and the Marine Aviation Training Support Groups located across the United States.

### EDUCATION COMMAND (EDCOM)

Located in Quantico, VA, home of the Marine Corps University, EDCOM is responsible for developing, delivering, and evaluating the professional military education programs through resident and distance education programs to prepare leaders to meet the challenges of the national security environment. EDCOM also preserves, promotes, and displays the history and heritage of the Marine Corps through the History and Museum Division and the National Museum of the Marine Corps.

### MAGTF TRAINING COMMAND (MAGTF-TC)

Located in Twentynine Palms, CA, MAGTF-TC is responsible for designing, executing, and assessing Marine Air Ground Tasks Forces (MAGTFs) and Major Subordinate Element level training exercises. MAGTF-TC conducts relevant live-fire combined arms training, urban operations, and joint and coalition level integration training that promotes operational forces readiness.



## COURSES AND FACILITIES

A broadly capable middleweight force will meet future requirements through the integration of newly acquired and traditional operational competencies. To remain America's Expeditionary Force in Readiness, the Marine Corps requires balanced, high-quality training and education at all levels. As history has repeatedly shown, wars are won by the better-trained force, not necessarily the larger one. In the midst of ongoing combat operations, the Marine Corps is realigning education and training efforts to enable Marines and Sailors to succeed in conducting distributed operations in increasingly complex environments against any threat. To meet these challenges, the Marine Corps Training and Education Command (TECOM) will provide the training courses and facilities that are responsive and relevant for preparing individual Marines and Marine Corps units via targeted, progressive training and continuous assessment.

Our current training is focused on preparing Marine units for combat, counterinsurgency and stability operations in support of *Operation Enduring Freedom* (OEF). The past 10 years of combat have demonstrated that there is a positive correlation between quality training and education and individual/unit readiness; both directly translate to operational success. Therefore, as we draw-down from Afghanistan, our training and education will rebalance to support the execution of a wider range of operational capabilities. We will achieve this balance by leveraging competencies in entry-level and skills progression training and by re-emphasizing core competencies in combined arms and amphibious operations, irregular warfare, humanitarian assistance, and inter-agency coordination. In addition, we are making the investments necessary to implement the recommendations of the 2006 Officer Professional Military Education Study (The Wilhelm Report) to transform the Marine Corps University (MCU) into a "world class institution." These efforts will ensure that Marines are prepared to meet the challenges of post-OEF operational environments.

Our training and education programs will culminate with the MAGTF Training Program. Through a standardized training approach, the MAGTF Training Program will develop the essential unit capabilities necessary to conduct integrated MAGTF operations. Building on lessons learned over the past 10 years, this approach includes focused battle staff training and a service assessment exercise modeled on the current exercise, Enhanced Mojave Viper. Additionally, we will continue conducting large scale exercises that integrate training and assessment of the MAGTF as a whole. The MAGTF Training Program facilitates the Marine Corps ability to provide multi-capable MAGTFs prepared for operations in complex, joint and multi-national environments against hybrid threats.

In order to fully realize these training and education enhancements, we will continue investing in the resources, technologies and innovations that enable them. These investments include modernizing our training ranges, training devices, and infrastructure to ensure quality resources are available to support the training of Marines, individual to MAGTF. We will also leverage advanced technologies and simulation systems to create realistic, fully immersive training environments.

## TRAINING

### MAGTF TRAINING PRE-DEPLOYMENT TRAINING PROGRAM (PTP)

#### MARINE AIR GROUND TASK FORCE (MAGTF) TRAINING

The Marine Corps has developed an extensive PTP, based on the Pre-Deployment Training Continuum, to prepare Marines for today's operational environments. The PTP establishes a coherent progression of skill level training conducted by commanders and evaluated at PTP Mission Rehearsal Exercises (MRXs). Training is conducted in four nested "blocks" in ascending com-

petency levels. Marine Expeditionary Force commanders determine what level of competency is required for each deploying unit based on mission-essential task analysis. MEF commanders set unit priority for service level training events and ensure units participating in service-level training events have appropriate support attachments during respective blocks of training. The following training blocks comprise the PTP Continuum.

#### **BLOCK 1**

Block 1A and 1B training consists of Sustained Core Skills Training, Core Plus Skills Training, and Marine Corps Common Skills Sustainment Training. Core Plus Skills are those combat-focused skills that are environment, mission, rank, or billet specific and are developed after a Marine is assigned to an operational unit. Block 1 training also includes formal schools training. Career progression training is critical to effective building block training, and the intent is for all incoming leaders to have received the appropriate schooling prior to beginning the units' collective training. For aviation units, Block 1 provides resident instructor development, certification, and sustainment of the qualifications and designations of individual aircrew and maintainers for annual training requirements.

#### **BLOCK 2**

Block 2 training consists of Core Capabilities Training conducted within a unit. Core Capabilities are the essential collective functions a unit must be capable of performing during extended combat operations. For battalion-sized units, Block 2 is company-level and below training. For squadrons, Block 2 is Core Skills refinement and flight-leadership development, normally single-ship through division-flight operations.

#### **BLOCK 3**

Block 3 training is based on unit Mission Essential Tasks (METs) and consists of Advanced Core Capabili-

ties (or Core Plus for Aviation) Training conducted by a unit and by the unit's higher headquarters. For battalion-sized units, Block 3 is battalion-level training. For aviation units, Block 3 is squadron-level integration with adjacent aviation and supported ground units utilizing formalized command and control functions to perform assigned METs to their required output standards.

#### **BLOCK 4**

Block 4 training is battalion/squadron-level core competency training and is also known as the unit's Mission Rehearsal Exercise (MRE). Block 4 training is a unit's "graduation" pre-deployment training exercise and is individually tailored to support and assess a unit's ability to perform tasks on its assigned Mission Essential Task Lists. Battalion and higher deploying units will typically undergo a Training and Education Command (TECOM)-supported MRX. Deploying units that do not participate in an MRX complete an Alternate Mission Rehearsal Exercise that is supported by the parent MEF. The MRX provides information for the MEF Commanding General's unit certification process.

#### **ENHANCED MOJAVE VIPER**

Conducted onboard the Marine Corps Air-Ground Combat Center (MCAGCC) in Twentynine Palms, California, Enhanced Mojave Viper is a 28-day full-spectrum MRX that focuses on providing a service-level assessment of battalions and squadrons in preparation for deployment. The exercise scenario allows units to combine their core Marine Corps competencies with Afghanistan-specific capabilities. The exercise force composition consists of two infantry battalions, a combat logistics battalion, and three flying squadrons (fixed wing, rotary wing, and assault support). Throughout the exercise, units undergo training and assessment in offensive operations, defensive operations, stability operations and counterinsurgency. Under various conditions, including desert, limited

visibility, urban, rural, joint, and interagency missions, units are provided a live-fire, combined-arms training venue that closely resembles the conditions in which they will operate once deployed.

### MOUNTAIN EXERCISE

Mountain Exercise is a 28-day, Block 3 Marine Air Ground Task Force (MAGTF) exercise conducted at the Marine Corps Mountain Warfare Training Center (MCMWTC) at Bridgeport, California. This exercise focuses on military mountaineering technical skills, and tactical operations across the warfighting functions, at medium to high altitudes in complex and compartmentalized terrain and in all weather conditions. The exercise is also conducted on the Lucky Boy Pass unimproved road network and the Hawthorne Army Depot (HWAD), Hawthorne, Nevada; Ryan Canyon Road's unimproved road network, and Naval Air Station Fallon, Nevada.

Mountain Exercise includes the following five phases:

- Phase I, **Preparation and Deployment**, involves selected individuals attending the MCMWTC formal programs of instruction, which are focused at conducting operations in mountainous, medium to high altitude, and in a cold-weather environment. Phase I also includes the arrival of the units' advanced and main body, pre-environment training, the staff participating in the Mountain Operations Staff Planning Course, and a communication exercise.
- Phase II, **Shaping**, is focused on Basic Mobility, including military mountaineering mobility, survival, and technical skills and a company-platoon exercise.
- Phase III, **Decisive Action**, is focused on conducting offensive, defensive, joint, and coalition operations.
- Phase IV, **Security and Stability Operations**, is focused on mounted/dismounted counter-improvised explosive device training patrolling operations, military operations on urban terrain (MOUT), cultural engagements, and limited combined arms company live fire.

- Phase V, **Redeployment**, is focused on the unit retrograding to its home station.

### COMMAND AND CONTROL TRAINING AND EDUCATION CENTER OF EXCELLENCE (C2TECOE)

#### DESCRIPTION

The Command and Control Training and Education Center of Excellence (C2 TECOE) serves as the central Marine Corps agency for command and control training and education issues through all levels of Marine Air Ground Task Force (MAGTF) commanders and their staffs. In conjunction with appropriate Training and Education Command (TECOM) staff sections, it provides integrated and timely coordinated solutions for validated C2 training and education requirements among TECOM, the operating forces, the Advocates, Headquarters Marine Corps, Marine Corps Systems Command (MCSC), the Marine Corps Warfighting Lab (MCWL), and selected joint, service, and coalition agencies. Additionally, it identifies, tracks, and investigates the potential impacts of future MAGTF warfighting requirements or prospective changes within the C2 training and education continuum.

#### OPERATIONAL IMPACT

The C2 TECOE provides Active and Reserve Component commanders, their staffs, and individual Marines timely and relevant home-station and mobile training team training in the art and science of command and control to enable them to act more decisively and effectively than the enemy. C2 TECOE works in concert with the Marine Corps Tactics and Operations Group (MCTOG), the Marine Corps Logistics Operations Group (MCLOG), Marine Aviation Warfare Training Squadron (MAWTS)-1, and the MAGTF Staff Training Program (MSTP). The Center advances the mastery of command and control in the operating

forces through individual C2 operator and watch officer/watch chief and initial collective Battle Staff Training offered through its five, regionally situated subordinate MAGTF Integrated Systems Training Centers (MISTCs). These training centers are located at Camp Lejeune, North Carolina; Camp Pendleton, California; Twentynine Palms, California; Kaneohe Bay, Hawaii; and Okinawa, Japan, and are integral components of the MAGTF Training Program's C2 training continuum.

The MISTCs are under the operational and administrative control of the C2 TECOE and directly support the MEFs and the formal schools through a building block approach that focuses on C2 training tailored to unit size and type that culminates in increasingly complex series of battle drills that exercise unit standard operating procedures; introduce the latest tactics, techniques, procedures (TTPs); and incorporate C2 best practices.

The C2 TECOE is the lead proponent for the C2 Training and Readiness Manual. They work closely with the TECOM Ground Training Division and the Deputy Commandant for Plans, Policies and Operations to establish C2 training standards, regulations and practices regarding the training of Marines for combat. This supports unit commanders, who will continue to develop their own training plans to sustain proficiency and assess their units' progress toward attaining combat readiness. The C2 TECOE will continue to develop and maintain programs of instruction ensuring skill-training requirements support the building block approach in a formal school setting at each MISTC.

The C2 TECOE preserves and promotes C2 training for Operating Force Marines by coordinating with the Deputy Commandant for Combat Development, Deputy Commandant Advocates in HQMC, and liaising with the Marine Corps System Command Product Group system acquisitions processes. This includes participating in several ongoing manpower personnel and training plan IPTs to ensure that appropriate C2

sustainment training is incorporated throughout the lifecycle of a program. Additionally, the C2 TECOE is the lead doctrinal proponent for the Marine Corps Warfighting Publication (MCWP) 3-40.2 Information Management due to be published in mid-2012.

### PROGRAM STATUS

The C2 TECOE currently offers more than 20 programs of instruction through its MISTCs that support C2 operator, systems administrator, advanced systems courses, watch officer/watch chief courses and collective Battle Staff Training, with six more POIs under development. Additionally, it has a Commanders C2 Systems Overview course to acquaint operating force commanders with the tools available to them in today's digital Combat Operations Center. The C2 TECOE and its MISTCs effectively support the C2 training continuum from the individual Marine to the initial collective level that feeds more advanced collective training contained within the forthcoming Service-level Battle Staff Training Program, Integrated Training Exercise and Large Scale Exercise, all components of the MAGTF Training Program.

### MARINE CORPS TACTICS AND OPERATIONS GROUP (MCTOG)

The Marine Corps Tactics and Operations Group was established in February 2008 under the cognizance of Training and Education Command (TECOM) to implement the Operations and Tactics Training Program (OTTP). Located onboard Marine Corps Air Ground Combat Center, Twentynine Palms, MCTOG is a subordinate organization to Marine Air Ground Task Force (MAGTF) Training Command.

The mission of MCTOG is to provide standardized, advanced training and certification to Ground Combat Element (GCE) Operations Officers, Operations Chiefs, and other selected GCE training specialists in operations, combined-arms planning and

integration. MCTOG also supports unit readiness planning at the company, battalion, and regiment levels to support GCE training and readiness events. This is accomplished through the Tactical MAGTF Integration Course (TMIC). In addition, MCTOG provides advanced collective training to company through regiment battle staffs by executing the Battle Staff Training Program (BSTP). Lastly, MCTOG serves as the proponent lead to develop specified GCE publications, ensures GCE doctrine is nested and consistent both horizontally and vertically within the MAGTF construct, and ensures GCE doctrine and individual and collective training and readiness events are mutually supporting to enhance the combat readiness of GCE units.

### OPERATIONS AND TACTICS TRAINING PROGRAM

The OTTP increases combat effectiveness by developing a professional training culture, institutionalizing standardization, and accelerating innovation at all levels within the GCE. The three pillars of the OTTP are the TMIC, the BSTP, and the synchronization of GCE Doctrine and training and readiness events. The desired end state of the OTTP encompasses the following objectives:

- Ensure full interoperability of GCE units through standardization of tactics, techniques, and procedures in publications and in practice in the operating forces
- Inculcate GCE companies, battalions, and regiments with a higher level of training capability and rigor across the warfighting functions
- Codify and provide the training requirements for key GCE staff members to build expertise in the training, preparation, and employment of GCE units on the complex battlefields of the future
- Implement mechanisms to ensure GCE doctrine, standards, training, and requirements maintain pace with the changing threat environment and emerging operational concepts

- Enhance GCE unit preparation/performance in combat operations

### TACTICAL MAGTF INTEGRATION COURSE AND GROUND OPERATIONS CHIEF COURSE (GOCC)

The blended TMIC and GOCC are the method used to train and certify Operations and Tactics Instructors (OTIs) for the GCE. The GCE Operations Officer and Operations Chief must be certified as an OTI prior to being assigned to their designated billet. The OTIs are the unit proponents of standardization and, as such, assist the commander in the preparation of the unit for combat, tactical planning, and command and control of operations. The OTIs assist their commanders with the identification of unit-specific training requirements and deficiencies as a result of evolving operational and threat environments. OTIs support the GCE by being:

- Master training designers able to implement and manage the unit readiness program
- Skilled in the art and science of planning and executing operations in complex environments
- Skilled in the art and science of command and control across the range of military operations
- Proponents of standardization to enable integration and interoperability with external organizations and enablers
- Advocates of best practices, lessons learned, resources, and emerging concepts.

### INTELLIGENCE TACTICS INSTRUCTOR COURSE

Intelligence Officers and Chiefs are a secondary training audience during the execution of TMIC. A gap analysis determined that intelligence officers and chiefs assigned to GCE units lacked certain capabilities and understanding of GCE operations. The Intelligence Department of HQMC, in concert with TECOM and MCTOG, developed a six-week parallel-tracked GCE Intelligence Tactics Instructor (ITI) Course that



provides specific intelligence training and then links the student with TMIC to solidify the intelligence and operations integration.

### BATTLE STAFF TRAINING PROGRAM

The Battle Staff Training Program (BSTP) is the method by which MCTOG assists commanders and OTIs in training units in advanced, collective Battle Staff command and control and planning skills. The BSTP prepares units to integrate Service, joint, and interagency assets in support of their anticipated missions during deployment. In addition, the BSTP uses tailored unit training packages, exercise support, and unit defined Mobile Training Team support packages to train unit battle staffs either at the MCTOG Battle Lab, or in support of Home Station Training. Furthermore, MCTOG is focused on the regiment, battalion, or company commander and staff in the information management, problem solving and resolution processes encountered in the current and future operating environments.

### SYNCHRONIZATION OF GCE DOCTRINE AND TRAINING AND READINESS

The MCTOG is the critical link between the GCE Advocate (the Deputy Commandant for Plans, Policies, and Operations) and the means by which the doctrine, tactics, techniques, procedures, training standards, curricula, and institutional training programs are established and kept current. As such, MCTOG will assist the GCE Advocate in developing standardized GCE individual and collective capabilities that are linked to best practices, current TTPs, and emerging requirements.

## MARINE CORPS LOGISTICS OPERATIONS GROUP (MCLOG)

Deputy Commandant, Installations and Logistics and Commanding General, Training and Education Command, partnered to establish the Marine Corps Logistics Operations Group (MCLOG). The MCLOG provides a capability similar to the Marine Corps Tactics and Operations Group (MCTOG) and Marine Aviation Warfare Training Squadron (MAWTS)-1 for logistics units in the operating forces. MCLOG will report to the Commanding General, Marine Air Ground Task Force Training Command (MAGTF TC), and will be located at Twentynine Palms.

MCLOG will serve as the following:

- The single logistics operations training element responsible to synchronize the logistics training and education continuum on behalf of the Logistics Advocate
- The lead for providing advanced and standardized tactical logistics operations training and education on behalf of the Logistics Advocate
- The logistics doctrine proponent on behalf of the Logistics Advocate.

MCLOG will implement the Logistics Tactics Training Program (LTTP) to enhance combat readiness and performance of logistics personnel and Logistics Combat Element (LCE) units in MAGTF operations. The cornerstone of the LTTP will be the graduate-level logistics operations courses, and the assignment of graduates to logistics operations officer billets in all elements of the MAGTF.

MCLOG also will work with MCTOG and MAWTS-1 to integrate Ground Combat Element; Aviation Combat Element; and LCE training and tactics, techniques, and procedures within the Tactical Logistics Operation Center (TLOC) through an Advanced Unit Collective training program that will assist LCE unit staffs in C2 and planning skills with a focus on logistics operations. This program will use tailored unit training packages, exercise support, and unit defined Mobile Training Team support packages to train logistics unit battle staffs either at the MCLOG facility, or in support of home station training.

## JOINT, INTERAGENCY, AND MULTINATIONAL (JIM) TRAINING

Leveraging several joint initiatives from the Office of the Secretary of Defense, the Chairman Joint Chiefs of Staff, and the newly formed J7 (Joint and Coalition Warfighting, or JCW) on the Joint Staff, Training and Education Command incorporates joint, interagency, and multinational training context into dynamic, capabilities-based training in support of national security requirements.

### JOINT TRAINING

Through the OSD-sponsored Joint National Training Capability (JNTC), the Training and Education Command (TECOM) has integrated specific joint context solutions to identified joint training shortfalls at U.S. Marine Corps Joint National Training Capability-accredited programs, which include:

- Marine Air Ground Task Force Training Command (MAGTF TC), Twentynine Palms, California
- Marine Aviation Weapons and Tactics Squadron-1 (MAWTS-1), Yuma, Arizona
- Marine Air Ground Task Force Staff Training Program (MSTP), Quantico, Virginia
- Mountain Warfare Training Center (MWTC), Bridgeport, California
- Marine Corps Tactics and Operations Group (MCTOG), Twentynine Palms, California

The JNTC also provides several tools that support the incorporation of joint training into Service Title 10 responsibilities. One of these tools is the Joint Training Enterprise Network (JTEN) that is the communications network for JNTC. The JTEN is a high-capacity, reconfigurable network that supports joint training exercises, and the evaluation of new warfighting concepts. Additionally, it allows for inter- and intra-Service forces to link “Service-owned” training and simulation networks to train in a live, virtual and constructive environment that blends live tactical forces with manned simulators and sophisticated computer models. A second tool is the JNTC sponsored, Joint Training Coordination

Program, which assists Marine Corps JNTC-accredited programs in gaining participation of others services at their training and exercises.

### INTERAGENCY COOPERATION AND TRAINING: INTERAGENCY COOPERATION AND TRAINING

TECOM leverages interagency participation such as subject matter expert attendance at pre-deployment training to increase realism and meet mission-training standards at pre-deployment training programs. Through efforts with the U.S. Agency for International Development, the Marine Corps Civil-Military Operations School, and MCTOG, deploying units have been trained in the use of the District Stability Framework assessment tool, which assists commanders with identifying the root causes of instability in their location, and target efforts to address these problems. Similarly, TECOM provides input to civilian training efforts to make them more accessible to Marine units, such as the Department of Agriculture’s Agricultural Development for Afghanistan Pre-Deployment Training program. TECOM also assists the State Department’s Bureau of Conflict and Stabilization Operations by supporting annual training aboard Marine Corps Base (MCB) Quantico for a civilian capstone exercise centering on the Civilian Response Corps.

### MULTINATIONAL TRAINING

Coalition partners are invited to participate in service-level training when feasible and relevant. One focus area is on operational level interaction, primarily through coordination and reciprocal participation in mission rehearsal exercises with partner nations where USMC units will serve as higher headquarters during current operations. Additionally, institutional-level interoperability is being pursued through staff and instructor exchange programs in respective training organizations. Opportunities to incorporate coalition partners into MAGTF TC training events such as En-

hanced Mohave Viper or the Weapons and Tactics Instructor Course are frequently pursued and exploited.

## FUTURE TRAINING: MAGTF TRAINING PROGRAM



The Training and Education Command (TECOM) is developing the next generation of training for Marine operating forces to prepare for future fights and operating environments. The Marine air Ground Task Force (MAGTF) Training Program will establish, define, and integrate the requirements for training programs and resources that will facilitate the development of warfighting capabilities in those operational forces comprising a MAGTF.

### BATTLE STAFF TRAINING PROGRAM (BSTP)

The BSTP is designed to provide training to battle staffs across all the elements of the MAGTF, at echelons from a battalion, or squadron, to Marine Expeditionary Force (MEF)-level. Most importantly, the BSTP integrates individual and collective training, provided by multiple organizations from across TECOM, into a single training continuum beginning with training of command and control systems operators, and concludes with a command post exercise that tests the abilities of the entire staff. The BSTP provides an invaluable tool for the commander to assist in the training of his staff, and provides the commander with a detailed

understanding of the full staff-training continuum.

### INTEGRATED TRAINING EXERCISE (ITX)

The ITX provides a battalion- or squadron-level collective training event supporting training in skills required to accomplish assigned core mission essential tasks, and serves as the Service level assessment of a unit. This program will be similar in scale to the type of combined arms training that was conducted prior to Operations Iraqi Freedom and Enduring Freedom and the Mojave Viper pre-deployment training program. It will include all elements of the MAGTF including command, ground combat, logistics combat, and aviation combat elements. ITX will provide training on the techniques of MAGTF integration at the tactical level and the technical skills allowing subordinate units of the MAGTF to work together.

### LARGE-SCALE EXERCISE (LSE)

The LSE is a Marine Expeditionary Brigade (MEB)/MEF-level exercise program that will use live-virtual-constructive training linked through a supporting network across the United States and with amphibious forces afloat, or ashore, to focus on the integration of headquarters organizations and their ability to conduct integrated MAGTF operations. It can be used as the final pre-deployment training event for a MAGTF that as has been designated to deploy, or it will serve as an exercise to validate the ability of the MAGTF to execute designated core mission-essential tasks, depending on requirements of the MEF commander. The LSE will increase joint and amphibious capabilities as the Marine Corps reconstitutes its full amphibious capability.

### AMPHIBIOUS CORE TRAINING

The Marine Corps is developing and refining key training programs to reinvigorate our amphibious capability. TECOM is preparing individual Marines through training and education at the Marine Corps

Expeditionary Warfare School, the Marine Corps Command and Staff College, and various courses at the Expeditionary Warfare Training Groups Atlantic and Pacific, such as the Type Commander Amphibious Training. We will prepare MAGTFs by training alongside the Navy through such exercises as amphibious landing exercises and MEB-level exercises.

## **TRAINING AND EDUCATION ENABLERS**

### **MARINE CORPS TRAINING INFORMATION MANAGEMENT SYSTEM (MCTIMS)**

MCTIMS is the Marine Corps emerging enterprise information system for training development and management. An official program of record with Marine Corps Systems Command oversight, MCTIMS web-enabled applications work in concert with Oracle databases containing USMC training information to provide integrated applications that serve all Marine Corps training development and management needs.

MCTIMS is the authoritative data source for all training data, generating, maintaining, sharing, and reporting training data as required by other Marine Corps and service-level systems. Early MCTIMS developments directly supported the mission of TECOM to provide entry-level trained Marines to the operating forces and supporting establishment. In the near future, units will use MCTIMS to develop the units' training plans, training schedules, and record training achievements.

MCTIMS is a government-owned software application that is available for use by the total force. The system standardizes Marine Corps training development and management by aligning to the Systems Approach to Training process.

### **TRAINING & READINESS (T&R) DEVELOPMENT MODULE**

The T&R Development Module is the backbone of the MCTIMS suite of modules. This module is used during T&R Development and Review Conferences to build or maintain individual and collective events and manage T&R data. The TECOM and Education Command (EDCOM) staff uses this web-based application to capture individual and collective training standards for an occupational field and Military Occupational Specialty (MOS) to produce the T&R manual. T&R Manuals provide commanders in the Operating Forces, Supporting Establishment, and formal learning centers with a tool for the planning and implementation of progressive training that ultimately will ensure individual and collective proficiency.

### **MILITARY OCCUPATIONAL SPECIALTY (MOS) MANUAL MODULE**

The MOS Manual Module supports TECOM's Ground Training Division mission to manage the MOS Manual for the Marine Corps. This module provides the capability to store web-based MOS Manual data to expedite the annual review and reduce the labor associated with management of the MOS Manual.

### **MOS ROADMAP MODULE**

TECOM and EDCOM use this web-based application to guide individual Marines on career training and education. Roadmaps are single-source documents containing grade-specific information related to training and education requirements from which Marines can make informed career decisions regarding assignment, training and education requirements and career progression opportunities. Leaders use the roadmap as an aid to counsel and mentor subordinates.

## UNIT TRAINING MANAGEMENT (UTM) AND INDIVIDUAL MARINE MANAGEMENT (IMM) MODULES

The UTM and IMM modules are the latest MCTIMS development efforts designed to directly support the Operating Force. The UTM module provides commanders with a toolkit that aligns with the unit training management process outlined in Marine Corps Reference Publication 3-0A, the Unit Training Management Guide. This capability enables commanders and their staff to execute doctrinal UTM practices via an automated system. Other capabilities within this module will allow units to record, track, and evaluate all unit collective-training requirements.

## ADDITIONAL MCTIMS DEVELOPMENTS TO SUPPORT THE MARINE CORPS

Two additional MCTIMS developments fielded during FY 2011 are the Curriculum Library and the Electronic Training Jacket (ETJ). The Curriculum Library provides Marines in the operating forces access to formal learning center course materials to support training and standardize instructional materials throughout the Marine Corps. Marines operating forces will be able to access lesson plans, student outlines, instructor preparation guides, and media to support unit training requirements. The ETJ provides a cradle-to-grave record of all training accomplishments for all Marines viewable by the individual Marine or their commander.

## OTHER FORMAL SCHOOL MANAGEMENT CAPABILITIES

**The Curriculum Management (CMD) Module.** TECOM and EDCOM staff and schoolhouse curriculum developers use this web-based application to create and manage curriculum for Marine Corps formal schools. The use of this module is mandated for the production of Marine Corps programs of instruction.

**The Student Evaluation (SEV) Module.** TECOM and EDCOM staffs use this web-based application to construct tests, record test data, track student scores and grade point averages, and generate reports. The SEV module controls the synchronization of this data with the external Question-Mark Perception applications. Student evaluation is also used to create survey questionnaires and track student responses.

**The Student Management Module.** TECOM staff uses this web-based application to manage rosters, units, and individual students for Marine Corps formal schools.

**Student Registrar.** The Student Registrar Module is management by the Formal School Training Division, TECOM. The TECOM and EDCOM staffs use this web-based application to manage class rosters and student registrations.

## MODELING & SIMULATIONS (M&S) TRAINING AND EDUCATION ENABLERS

Marine Air Ground Task Force (MAGTF) Training Simulations Division (MTSD), a directorate of the Training and Education Command (TECOM), has established a training modeling and simulation community of interest to facilitate information exchange and address specific focus areas, such as infantry skills simulations, staff training environment. MTSD also addresses simulation system integration, interoperability, interconnectivity, compatibility, and networking. Participants in this forum are drawn from across the Marine Corps and the science and technology community. With this forum's input, TECOM has published the Training and Education Modeling and Simulation Master Plan. The purpose of the plan is to inform Marines and other stakeholders of current and future efforts pertaining to training simulations and to guide the development and sustainment of effective simulation-based training in support of the operating forces.



Small-unit training is receiving particular focus by TECOM to prepare Marines for today's and future operating environments. The Squad Immersive Training Environment (SITE) program will significantly enhance collective training for the squad. SITE is envisioned as a multifaceted "toolkit" of integrated live, virtual, and constructive training capabilities that commanders can leverage to train their small units at all points along the training continuum. The SITE "toolkit" should include current virtual and live training systems appropriate for small units, and future capabilities that leverage emerging technologies.

TECOM has participated in numerous joint initiatives focused on immersive training at the squad and platoon levels. In support of the Enhanced Company Operations (ECO) concept, MTSD is examining the networking and interoperability of selected staff training, combined arms, combat convoy, combat vehicle, and aviation simulation systems to enable better training capabilities among critical MAGTF building blocks. These efforts will be integrated within the emerging Small unit Integrated Training Environment (SuITE) program to provide the domain for ECO.

TECOM's request to integrate the Marine Corps MAGTF Tactical Warfare Simulation system into its joint live, virtual, and constructive (JLVC) federation was approved. This incorporation will provide higher simulation fidelity of MAGTF and amphibious operations in joint exercises and enable the Marine Corps to better leverage the many JLVC tools to support Service training and Combatant Commander regional engagement exercises. TECOM is pursuing appropriate linkages among existing Marine Corps simulations to provide more robust capabilities and examining simulations that address political, military, economic, social, infrastructure, and information issues.

Finally, the MROC approved TECOM's Live, Virtual, and Constructive Training Environment (LVC-TE) Initial Capabilities Document that outlined desired LVC-TE capabilities. This analysis identified gaps in the Marine Corps ability to network current capabilities and delineated integration standards for future capa-

bilities. TECOM is further examining networking requirements to link simulation systems with each other and with live domain capabilities, and as well as provide access to existing Marine Corps, joint, interagency, and multinational partner training and modeling simulation networks. Such a network would support distributed training venues between MAGTF elements, enable large-scale MAGTF exercises, and facilitate Marine Corps participation in future joint and other exercises.

## MISSION-CAPABLE TRAINING RANGES



Marine Corps combat readiness depends on the continued availability of Ranges and Training Areas (RTAs) that provide opportunities for realistic, mission-oriented training in multiple, complex environments. To this end, the Marine Corps Training and Education Command (TECOM) continues to execute the comprehensive Mission-Capable Ranges Program. The purpose of Mission-Capable Ranges is to plan, program for, and execute the development, modernization and sustainment of RTAs, and the delivery of comprehensive range services and training support to the warfighter. Mission-Capable Ranges is requirements-driven, incorporating standards articulated in Marine Corps Reference Publication (MCRP) 3-0C *Operational Training Ranges Required Capabilities*, and requirements-based assessments of the capabilities of RTAs.

TECOM has established six cornerstone objectives



for Mission-Capable Ranges, including:

- Preserve and enhance the live-fire combined arms training capabilities of Marine Corps Air Ground Combat Center/Marine Air Ground Task Force (MAGTF) Training Command, Twenty-nine Palms, and Marine Corps Air Station (MCAS) Yuma Range Complex
- Recapture and enhance MAGTF and unit training capabilities of the nation's two premier littoral training areas, Camp Lejeune and Camp Pendleton
- Leverage technology to support every level of training with a goal of providing timely and objective feedback to the training audience
- Honor our commitments to protecting the environment, while preserving and enhancing our ability to conduct live-fire and maneuver training
- Facilitate cross-service employment of Marine Corps training ranges, and ensuring Marine Corps access to other-service ranges
- Support the Joint National Training Capability with the common range infrastructure and systems architecture to ensure effective joint training

Mission-Capable Ranges provides the Marine Corps with a comprehensive, fully developed strategy for providing modern RTAs and related services that are focused on current and future needs of the warfighter. The cornerstone of the program is **range modernization** through:

- Sustainment of ranges to maintain capabilities and

protect range investments

- Re-capitalization to upgrade or replace existing ranges and range resources
- Investment in new ranges that leverage advanced range instrumentation, targets, and training systems.

In recent years, the program has focused primarily on range modernization at the installation level and on assessing and supporting initiatives to address long-term requirements for sufficient land area and airspace for training. At our installations, Mission-Capable Ranges has delivered the range resources to support training requirements emerging from the theaters of operation, particularly those relating to urban and counter-IED tactics. Since 2006, the program has made unprecedented investments (approximately \$700 million) in Marine Corps training infrastructure.

As we look to the future, the program will increase its focus on realistic, immersive training environments for our Marines using integrated systems for tactical engagement, range instrumentation, interactive targets, threat simulators, and after-action review. Additionally, TECOM has initiated a comprehensive effort to field Training Support Centers at our major training bases to facilitate efficient and effective utilization of the full suite of RTAs and other training resources by the operating forces.

With regard to service-level initiatives, Mission-Capable Ranges has focused on three shortfalls:

- The inability of Marine Corps ranges to fully exercise

a large MAGTF in a realistic, doctrinally appropriate training scenario

- Inadequate training opportunities for the Marine units stationed in the western Pacific and Hawaii
- Inadequate aviation training facilities on the east coast of the United States with range capabilities such as those provided by MCAS Yuma on the west coast.

TECOM will continue to focus on meeting these deficits. Concurrently, TECOM will engage in forward-looking initiatives as it confronts future challenges to RTA capabilities, including potential limitations on resources available for range modernization and sustainment. Sufficient commitments to sustaining and enhancing range capabilities are necessary to ensure RTAs continue to fully support the training requirements of the Marine Corps.

### COMBINED ARMS COMMAND AND CONTROL TRAINER UPGRADE SYSTEM (CACCTUS)



#### DESCRIPTION

The CACCTUS is a combined arms staff training system that, when fully fielded will enable comprehensive Marine Corps staff, unit, team, and individual training at home station Combined-Arms Staff Training (CAST) facilities, and through distributed train-

ing involving CAST facilities across the Marine Corps. CACCTUS is an upgrade to the USMC's CAST that provides fire support training for Marine Air Ground Task Force (MAGTF) elements up to and including the Marine Expeditionary Brigade (MEB) level.

Using the system components and simulation capabilities, two-dimensional and three-dimensional visuals, interfaced Command, Control, Communication, Computers and Intelligence (C4I), synthetic terrain, and an After-Action Review (AAR), CACCTUS immerses trainees in a realistic, scenario-driven environment. The simulated scenarios enable commanders and their battle staffs to train or rehearse combined arms tactics, techniques, procedures and decision-making processes prior to any physical engagement. In addition, CACCTUS provides training across live, virtual, and constructive training networks through interoperability with appropriate C4I systems in a training environment.

#### OPERATIONAL IMPACT

The CACCTUS provides critical combined arms command and control integration and fire support coordination training to units leading up to and just prior to participating in live fire exercises and deployment.

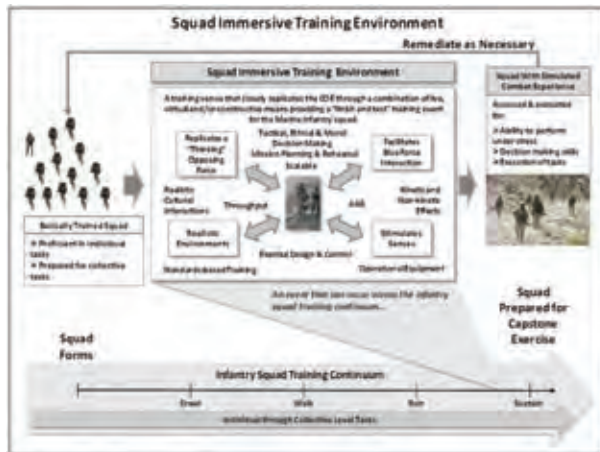
#### PROGRAM STATUS

All five CAST facilities have been fielded with Version 5.2.1. Authority to operate as a standalone system was granted in August 2011.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
Riptide Software, Inc. Oviedo, Florida

## SQUAD IMMERSIVE TRAINING ENVIRONMENTS (SITE)



### DESCRIPTION

SITE is an integrating training construct focused on preparing squads for missions in the contemporary operating environment. These environments will provide the commander training venues to better prepare infantry squads, while enhancing existing training systems that meet the essential training capabilities for small unit and squad leader development. SITE also provides centralized management and oversight for the small unit and squad training capabilities, with decentralized execution for development and fielding of individual increments. The program leverages efforts across the Science and Technology community and provides means to aid the transition of most technologically advanced capabilities into Programs of Record.

### OPERATIONAL IMPACT

SITE addresses the following training capability gaps:

- Enable proper employment of Operational Weapons and Realistic Casualty Determination
- Provide realistic Battlefield Effects to set the conditions for maneuver
- Enable proper employment of operational equipment

- Support Infantry Squad Core Competencies
- Provide realistic environmental conditions for required geographic regions
- Provide realistic characteristics of a “Thinking” Opposing Force
- Provide realistic indigenous population
- Provide the ability to conduct Mission Planning and Rehearsal
- Provide realistic contemporary operating environment entities
- Provide stimulation of senses to enhance realism of training and support decision making
- Provide high fidelity After-Action Reviews

Provides USMC Vision and Strategy 2025-CMC Planning Guidance:

- Improve training and experience level for Maneuver Unit Squad Leaders.

### PROGRAM STATUS

Research Development Test and Evaluation is planned in FY 2013 for Live Core System enhancements and in FY 2014 for Virtual Core System enhancements.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
TBD

## SUPPORTING ARMS VIRTUAL TRAINERS (SAVT)

### DESCRIPTION

The SAVT advances the training capability, operational readiness, and tactical proficiency of Marine Corps joint terminal attack controllers, forward observers, and forward air controllers. This virtual simulator provides personnel with training scenarios that require the placement of tactical ordnance on selected targets using Joint Close Air Support procedures and observed



fire procedures. These scenarios will allow for practical application of Naval Surface Fire Support, artillery and mortar fire, neutralization, suppression, illumination, interdiction, and harassment fire missions.

### OPERATIONAL IMPACT

Simulation events can replace 33 percent of Marine Corps live-fire Training and Readiness requirements, as well as Joint Service currency training requirements.

### PROGRAM STATUS

Six systems have been installed, one each at Camp Lejeune, Twentynine Palms, Camp Pendleton, Marine Corps Base Hawaii, Marine Corps Air Stations Yuma, and Okinawa. During January 2012, the MCAS Yuma system was part of the Proof of Concept linking the SAVT with the AV-8B aircraft trainer. The Yuma SAVT has been assigned to Aviation Weapons Systems Requirements Branch for further refinement with the inter-operability between these two systems and other simulation trainers in the future.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
TJ Inc., Christmas, Florida

## MARINE CORPS HISTORY DIVISION

The History Division's mission is to provide knowledge of the Marine Corps past to ensure an understanding of its present and future for the Marine Corps and the American people. The division does so in the following ways:

- By making the Corps hard-earned experience and official history available for practical study and use
- Preserving a written, spoken, and visual record of its

activities and traditions by collecting papers, articles, images, and interviews of lasting historical interest

- Assisting in the Marine Corps use of military history to aid in professional military education and training and to provide background and precedents for decision-making.

Division historians, working in close coordination with the National Museum of the Marine Corps, collect, research, write, publish, and distribute accounts that are professional presentations of permanent historical value to the Marine Corps and materially contribute to the military, political and social history of the United States and its armed forces. During 2009, the History Division moved into facilities on the campus of Marine Corps University (MCU).

The History Division has four Branches — History, Reference, Editing and Design, and Headquarters. Each branch contributes to the research, writing, and editing of the official histories of the Marine Corps. For example, the Reference Branch fulfills several specific functions and to perform these functions maintains topical working files that cover five areas: (1) specific history subjects; (2) biographical files on prominent Marines; (3) unit files; (4) photo files; and (5) geographic area files.

As part of its mission, the Division also conducts research, writes battle studies, deploys combat historians with operational units to collect and preserve primary source materials; conducts interviews with a wide variety of current and former Marines in support of the Division's research and writing efforts; edits, designs, produces, prints, warehouses, and distributes products; compiles, edits and publishes *Fortitudine*, the quarterly bulletin of the Marine Corps Historical Program; and carries out all functions of the Marine Corps University Press. Founded in 2008, the Marine Corps University Press seeks to further the vision, educational objectives and curriculum of MCU through scholarly dialogue not offered in other forums.

The Marine Corps University Press published the first issue of the *Marine Corps University Journal*



in 2010 and plans to produce two issues in 2011. The journal features articles, interviews and reviews on issues of strategy and international security. During 2010, History Division also expanded the operations of MCU Press. It will maintain progress on a multi-year effort to scan and process key Reference Branch materials to make them available in a digital format. The History Division's website ([www.history.usmc.mil](http://www.history.usmc.mil)) is continually being improved and expanded, as is the Marine Corps University Press website ([www.tecom.usmc.mil/mcu/mcupress/](http://www.tecom.usmc.mil/mcu/mcupress/)).

## NATIONAL MUSEUM OF THE MARINE CORPS (NMMC)

The President of the United States dedicated the National Museum of the Marine Corps (NMMC) on November 10, 2006. Located in Quantico, Virginia, the NMMC is one of the most popular cultural attractions, with an average annual visitor attendance of more than 500,000 during each of its first five years. Its exhibitions recreate environments and immerse visitors into Marine Corps action. NMMC's mission encompasses the following activities:

- Collecting and preserving objects that reflect the history of the Corps
- Interpreting Marine Corps history
- Educating students and families
- Conducting collections-based research
- Supporting the recruitment, education, and retention of Marines.

The National Museum is being constructed in phases, the first of which includes approximately 120,000 square feet. It opened with permanent galleries dedicated to "Making Marines," World War II, the Korean War, and the Vietnam War. In 2010, three additional galleries opened to tell the story of the Marine Corps from 1775 through World War I. In immersive exhibits, visitors take their places alongside Marines in battle. Aircraft, tanks, and other vehicles are promi-

nently displayed, and period uniforms, weapons, medals, flags, and other artifacts help visitors trace the history of the Corps. Future phases will add a giant-screen theater, classrooms, an art gallery, visible storage, and more exhibition space to the flagship building. A chapel that overlooks the Museum and Semper Fidelis Memorial Park opened in October 2009. Also planned as part of the 135-acre "Marine Corps Heritage Center" are a hotel and conference center, artifact storage and restoration building, and additions to Semper Fidelis Memorial Park.

The NMMC reports to Marine Corps University and is federally funded and staffed by Marine Corps civilian employees and uniformed Marines. However, its construction and expansion would not be possible without the assistance of the Marine Corps Heritage Foundation. This strong public-private partnership, approved by Congress in 2001, allowed for the construction of an iconic building and the delivery of the highest-quality programs.

The strength of any history museum rests with its collections. NMMC's keystone objects that represent how Marines have waged war since 1775 — weapons, tanks, vehicles, aircraft — were transferred to the museum by the Marine Corps. But pride in being a Marine has prompted many generations of Leathernecks to donate their personal items to the permanent collection. Because the museum is charged with caring for its collections — some 42,000 objects — in perpetuity, curators add to the collection very selectively, consulting a formal collections rationale for guidance. Stewardship responsibilities are divided among five broad categories: ordnance; uniforms and heraldry; aviation; art; and general collections. Curators and collections managers work together to fully account for the collection.

As is often the case with museums, less than ten percent of NMMC's objects are on exhibition at any one time. Most of them are in storage at Marine Corps Base Quantico, while some objects are on loan to other museums around the country. A team dedicated to the

preservation of aircraft, vehicles, artillery pieces, and other large artifacts completes the detailed restoration of several artifacts each year.

Working with curators and historians, an in-house exhibitions team designs and oversees permanent and temporary installations, including the Commandant's Corridor at the Pentagon. Museum educators use these exhibits to craft formal education programs that meet the needs of classroom teachers and are linked to specific standards of learning.

Education at the museum can definitely be fun, especially for "Little Marines", with puppet shows, hands-on activities, story telling, trains, and gallery hunts. Popular family day programs are offered on the second Saturday of each month. Marines attending formal schools also make good use of the Museum as part of their professional military education.

Since World War II, the Corps has been instructing a small number of Marines to "go to war and do art!" Continuing in that tradition, in 2010 the Museum deployed one artist to Haiti, and training sites in the United States to capture what today's warriors are accomplishing. More than 60 works from the combat art collection were featured in an exhibit at the Arch during Marine Week Saint Louis in 2011.

In 2009, the Museum received the Themed Entertainment Association's award for Best New Museum, and the Secretary of the Navy recognized the museum with the Award of Merit for Group Achievement. The museum stands as a proud acknowledgement of the courage and commitment to duty delivered by all Marines, in support of today's Marine Corps families, and as an inspiration to the next generations of Americans.

In addition to the NMMC, command-specific museums are located at Recruit Depots San Diego, California, and Parris Island, South Carolina; Marine Corps Air Station Miramar, California; and at the Marine Corps Mountain Warfare Training Center Historical Display at Bridgeport, California. These museums reflect the unique interests and objectives

of those facilities. For additional information, see [www.usmcmuseum.org](http://www.usmcmuseum.org).

### CENTER FOR ADVANCED OPERATIONAL CULTURE AND LEARNING (CAOCL)

The CAOCL is tasked with ensuring that Marines are regionally focused, globally prepared, and effective at navigating and influencing culturally complex 21st-century operating environments. CAOCL provides operationally relevant products and services and accomplishes its mission by ensuring a comprehensive response to the Corps needs through various means.

### POLICY AND PLANNING

CAOCL supports the Marine Corps in formulating policies, plans, and strategies to address regional understanding, operational culture, and language familiarization requirements across the doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) spectrum.

### REGIONAL, CULTURE, AND LANGUAGE FAMILIARIZATION (RCLF) PROGRAM

CAOCL serves as the administrator and coordinator of the Marine Corps RCLF Program, which is a career-long training and education program that begins at accession and instills, develops, and sustains a basic language, regional, culture capability in our career Marines to ensure that the Corps has assets within each unit to assist in operational planning and execution in all operationally significant regions of the world. The RCLF Program is still under development but has met several key milestones on the path to full implementation, with three of six planned officer instructional blocks launched and five enlisted instructional blocks becoming available in 2012. As of late 2011, there were more than 8,000 Marine officers with regional assignments, with enrollment set to substantially grow

with the launch of the enlisted instructional block for sergeants.

### PRE-DEPLOYMENT TRAINING AND RESOURCES

**Language Familiarization Training.** CAOCL serves as the central point of coordination for language familiarization training for all general-purpose Force Marines other than Foreign Area Officers and professional linguists. CAOCL uses a combination of on-staff language instructors, Defense Language Institute language instructors, and computer-based language training products to meet the operational requirements of Marines and units preparing for worldwide deployments. CAOCL language familiarization programs, regardless of method of delivery, focus on mission-oriented tactical phrases most likely to be used by Marines during exercises and operations.

CAOCL maintains Language Learning Resource Centers (LLRCs), which are technology-enhanced classrooms equipped with culture and language study materials and software, at eight major Marine Corps bases and stations to facilitate culture and language training for individual Marines and units. This helps commands meet pre-deployment training requirements and home-station sustainment training requirements. CAOCL also provides phrase cards for ready reference in deployed environments.

**Operational Culture Training.** CAOCL provides operational culture training via mobile training teams for Marines and units deploying anywhere in the world, focused on those operationally relevant aspects of culture that will enhance Marines' ability to navigate and influence a specific operating environment during the accomplishment of their missions.

CAOCL provides Operational Culture-General instruction, preparing units with skills to work within any culture around the world. The center also provides Operational Culture-Specific classes and briefs for units who need to learn about the cultures they will operate within during a specific deployment and mis-

sion. CAOCL likewise assists units in practicing techniques for incorporating operational culture into their planning process. CAOCL incorporates the integral skills of using an interpreter, understanding and using non-verbal communications, and interacting with a foreign population into culture training. Focusing primarily on commanders and key personnel, CAOCL also provides Key Leader Engagement training, which combines culture and language skills for effective cross-cultural communications. Additionally, CAOCL publishes and distributes a variety of cultural reference material and field guides to assist Marines while deployed or during training.

CAOCL Liaison Officers at each Marine Expeditionary Force (MEF) assist Marine units in accessing resources, scheduling training, and fulfilling culture and language training requirements.

### OPERATIONAL SUPPORT

CAOCL provides subject matter experts in direct support of the operating forces. These experts assist commanders in understanding the cultural terrain of the battlespace and in planning operations. They serve as evaluators and advisors during mission rehearsal exercises, assist in scenario and exercise design when requested, and provide a reach-back resource for deployed forces for issues related to operational culture. Cultural Advisors to MEF and Ground Combat Element (GCE) commanders serve as special staff officers during pre-deployment training and deploy with the units as integral members of operational staffs for specified deployments to provide personal advice to commanders and to assist in integrating operational culture into the planning process.

### PROFESSOR OF OPERATIONAL CULTURE

CAOCL maintains a faculty member at Marine Corps University (MCU) for providing instruction during Professional Military Education to MCU students on the concept of operational culture and its ap-

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plication in Marine Corps planning and operations. The professor also conducts ongoing research on the subject of operational culture.

### TRANSLATIONAL RESEARCH GROUP

The Translational Research Group (TRG) supports CAOCL's activities by providing the scientific basis and scholarship — specifically oriented on Marine Corps missions and guidance — required for training, education, policy, and programming. The TRG conducts the work necessary to ensure that the globally applicable concepts and skills of social science are “operational-

ized” for use by Marines, as well as leveraging expertise from other organizations. TRG also has responsibility for developing valid assessment platforms to ensure CAOCL's activities are meeting the needs of the operating forces. TRG brings together scientists with critical disciplinary backgrounds that are uncommon in the Department of Defense. Therefore, although focused on CAOCL, TRG's expertise is also brought to bear on broader issues of interest to the Corps Training and Education Command, such as resiliency.



## SECTION 4: FIRE SUPPORT





## INTRODUCTION

In 2007, the “Major Combat Operations Analysis for Fiscal Years 2014 to 2024” study scrutinized the in-service organic fire support of the Marine Air-Ground Task Force (MAGTF) to determine the adequacy, integration, and modernization requirements for ground, aviation, and naval surface fires. The Marine Corps also performed a supplemental historical study using *Operation Iraqi Freedom* data to examine MAGTF fires in the full spectrum of warfare. These studies reconfirmed our development of complementary systems of ground indirect fires.

Ground indirect fires require a medium-caliber cannon artillery capability, an extended-range ground-based rocket capability, and a capability with greater lethality than current mortars but greater tactical mobility than in-service artillery systems. This provides a balanced, expeditionary, ground-based fires capability that is responsive, complementary, redundant, and within the range and lethality requirements of the targets the Marine Corps will face across the full range of military operations.

The foundation of ground indirect fires is the M777A2 Lightweight 155mm howitzer that, through design innovation, navigation and positioning aides, and digital fire control offers significant improvements in lethality, survivability, mobility, and durability compared to the M198 howitzer. The High-Mobility Artillery Rocket System (HIMARS) fills a critical range and volume gap in Marine Corps fire-support assets. HIMARS provides an extended-range precision capability to Marine forces. The third “leg” of Marine Corps ground indirect fires is the Expeditionary Fire Support System (EFSS), a towed 120mm mortar. EFSS will be the principal indirect fire support system for helicopter- and tiltrotor-borne forces executing ship-to-objective-manuever as part of a MAGTF. When paired with an Internally Transportable Vehicle, EFSS can be transported on board MV-22 and CH-53E/K aircraft. EFSS-equipped units will have immediately responsive, organic indirect fires at ranges beyond current infantry battalion mortars.

Several additional innovative systems related to fire support significantly enhance the warfighting efficiency and effectiveness of the MAGTF, including the Advanced Field Artillery Tactical Data System, and the Target Location, Designation and Handoff system. In addition, the development of precision guided munitions, such as Excalibur, Guided Multiple-Launch Rocket System and the Precision Extended Range Munition, has shown lethality on the battlefield while minimizing collateral damage.

## HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS)



### DESCRIPTION

HIMARS is a C-130 aircraft-transportable, wheeled, indirect-fire, rocket/missile system capable of firing all rockets and missiles in the in-service and future Multiple-Launch Rocket System Family of Munitions (MFOM). The HIMARS launcher consists of a fire-control system, carrier (automotive platform), and launcher-loader module that will perform all operations necessary to complete a fire mission. The basic system is defined as one launcher, two resupply vehicles, and two resupply trailers and munitions.

### OPERATIONAL IMPACT

HIMARS addresses an identified, critical warfighting deficiency in Marine Corps fire support. HIMARS primarily employs the guided MLRS rocket to provide precision fires in support of maneuver forces. HIMARS is a transformational responsive, general-support/general support-reinforcing, precision, indirect fire weapon system that accurately engages targets at long ranges (greater than 40 miles) with high volumes of lethal fire under all weather conditions and throughout all phases of combat operations ashore.

### PROGRAM STATUS

The HIMARS program is in the operations and support phase. HIMARS achieved Initial Operational

Capability in the fourth quarter of FY 2008 and Full Operational Capability in FY 2010. In early 2012, HIMARS was fielded to two additional battalions (one active and one Reserve) in the Marine Corps. The program continues to procure munitions in support of operations and sustainment.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:

Launcher and MFOM: Lockheed Martin Corporation, Missiles and Fire Control Division, Dallas, Texas

## LIGHTWEIGHT 155MM HOWITZER (LW155)



### DESCRIPTION

The LW155 is a joint Marine Corps/Army program whose mission is to develop, produce, field and sustain a towed 155mm howitzer. Designated the M777A2, the LW155 replaces the M198 Howitzer providing direct, reinforcing and general support fires for both services.

The LW155 incorporates innovative design technologies to reduce the system weight to less than 10,000 pounds while providing increased mobility, survivability, deployability and sustainability in expeditionary operations throughout the world. It is the first ground combat system whose major structures

are made of high-strength titanium alloy resulting in a weight savings of more than 7,000 pounds when compared to the M198 system. The system makes extensive use of hydraulics to operate the breech, loading tray, and suspension system reducing crew size and fatigue. The M777A2 provides significant improvements in displacement and emplacement, capable of being emplaced in less than 3 minutes and displaced in 2-3 minutes. A primer feed mechanism supports firing a maximum of four rounds per minute, with sustained firing of two rounds per minute. The M777A2 is capable of firing unassisted high-explosive projectiles using conventional and modular propellants to a range of 15 miles and rocket-assisted projectiles to approximately 19 miles.

The M777A2 is a pre-planned upgrade to the initial M777 design that adds a Digital Fire Control System (DFCS) improving pointing accuracy to 1 mil. The DFCS uses a global positioning system, an inertial navigation unit, and a vehicle motion sensor to accurately locate and orient the weapon to deliver greater accuracy and responsiveness. The system integrates radios for voice and digital communications and a chief of section display that can be mounted into the cab of the prime mover for use as a navigation aid during towing. The systems mission computer processes fire missions and outputs pointing information to on-board gunners and chief of section displays. A planned software upgrade will support on-board ballistic computations commencing in the fall of 2013.

### OPERATIONAL IMPACT

The LW155 provides significantly greater combat capability to troops. The weight reduction improves transportability and mobility without impacting range and accuracy. The M777A2 is towed by the USMC Medium Tactical Vehicle Replacement and can be airlifted by the CH-53E/K, CH47D and the MV-22B Osprey into remote high-altitude locations inaccessible by ground transportation.

The M777A2 can fire the precision guided Excalibur munitions up to 24 miles with sufficient accuracy, for example, to target commensurate portions of a building, reducing the chance of non-combatant casualties and enabling supporting fire to be delivered much closer to friendly troops. The M777A2 has proven it is battle worthy and reliable, achieving an operational availability greater than 90% supporting Operation Enduring Freedom for USMC, Army and Canadian forces.

### PROGRAM STATUS

The LW155 has been in-service with the U.S. Marine Corps and Army since 2005 and is deployed in current operations. The Marine Corps has procured its full approved acquisition objective of 511 M777A2 howitzers while the Army has purchased 488 systems. Both services will take final deliveries during 2013. The Canadian army purchased 37 base-model M777s under a foreign military sale contract while the Australian army has purchased 54 M777A2s to date. The Government of India has also expressed interest in purchasing the M777A2 submitting a Letter of Request for 145 systems in Nov 2012.

#### Developer/Manufacturer:

The M777A2 prime contractor is BAE Systems located in Barrow in Furness in the United Kingdom. BAE Systems manages a supply chain consisting of both US and UK vendors who deliver components for final integration at BAE systems integration facility in Hattiesburg, MS. The Program Manager -Towed Artillery Systems also supplies a number of Government Furnished Equipment items, including the Cannon Assembly manufactured by Watervliet Arsenal. Final acceptance testing occurs at Yuma Proving Grounds.

## ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM (AFATDS) FAMILY OF SYSTEMS



### DESCRIPTION

The GYK-60 AFATDS is an automated fire-support Command and Control system that provides the Marine Air Ground Task Force (MAGTF) the ability to rapidly integrate

all fire-support assets into maneuver plans via digital data communications links. AFATDS supports the timely exchange of fire-support information and target processing essential to survival on the modern battlefield through the integration of all fire support assets, including artillery, rockets, mortars, naval surface fire support, and close air support. Additionally, the PYG-1 Back-Up Computer System (BUCS) and Mobile Tactical Shelter (MTS) are subsystems of the AFATDS program that fulfill requirements identified in the USMC AFATDS Operational and Organizational Concept.



The AN/PYG-1 BUCS is a hand-held computer system that resides on a Ruggedized Personal Digital Assistant designed to provide a back-up capability for computing ballistic firing solutions, as well as survey and meteorological functions, in support of field artillery cannon systems. The BUCS hosts the following three software applications:

- Centaur, the Light-Weight Technical Fire Direction System application for computing safety parameters and artillery technical firing solutions
- Field Artillery Survey Program software to compute artillery survey data
- The meteorological software application to convert raw meteorological Plot Balloon readings into bal-



listic and computer meteorological messages

The TSQ-17 MTS is a modified U.S. Army-procured shelter mounted on a High-Mobility Multiple Wheeled Vehicle employed by the battery Fire Direction Center (FDC), Battery Operations Center, and Fire Support Teams. It provides environmental protection for the AFATDS, its associated peripherals, and the AFATDS operators. The MTS is designed to protect against wind driven sand, dust, and rain. It will also permit FDC and liaison sections to perform required tasks at night without compromising light discipline. The MTS provides environmental protection at the battery level, while the Combat Operations Center provides environmental protection for AFATDS at the battalion and above.

### OPERATIONAL IMPACT

AFATDS will be the primary Commanders Fire Support Coordination System employed from Marine Expeditionary Force to battery-level operations. AFATDS will be used to provide the commander with the ability to rapidly employ all fire-support assets at his disposal. This will allow him the flexibility to determine what weapon systems to employ in shaping and dominating his battle space. AFATDS will greatly enhance the interchange of tactical data between all MAGTF tactical command and control systems through the use of graphics, common operating applications, and communications.

## PROGRAM STATUS

The AFATDS program is an Evolutionary Acquisition program, designated an Acquisition Category II for the Army. The AFATDS is a multiple service program and the Army is the Executive Service. The AFATDS program is in Sustainment. MTS achieved Initial Operational Capability in first quarter FY 2012. Full Operational Capability will be achieved in second quarter FY 2013.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:

AFATDS: Raytheon, Ft Wayne, IN

BUCS: Fire Support Engineering Division, Army

MTS: SPAWAR, Charleston, SC

## FAMILY OF TARGET ACQUISITION SYSTEMS (FTAS)

### DESCRIPTION

The FTAS is the Ground Combat Element's indirect-fire acquisition capability. The FTAS comprises the TPQ-46 Firefinder Ground Weapons Locating Radar (GWLR), the TPQ-48 Lightweight Counter Mortar Radar (LCMR), and the TSQ-267 Target Processing Set (TPS).

### OPERATIONAL IMPACT

The AN/TPQ-46 Firefinder has the ability to locate indirect-fire weapons — which include mortars, artillery, and rockets — within a 1,600 mil search sector from ranges of 0.75 to 24 kilometers. It is the primary indirect fire-detection system in the Marine Corps. The TPQ-48 LCMR provides a 6,400 mil mortar-detection capability at ranges of 1 to 5 kilometers, short-range detection coverage, and slewing/cueing intelligence to the TPQ-46 via the TSQ-267.

The TSQ-267 TPS is the command and control node of the FTAS capability, providing radar deployment orders, support functions, and target data to the counter-fire/countermeasure-servicing agent. The TPS uses the Advanced Field Artillery Tactical Data System as its primary communication, and Command and Control tool. As a program within Program Manager Radar Systems, the capability is being fielded under an Abbreviated Acquisition Program (AAP).

## PROGRAM STATUS

The FTAS Program Office is supporting the warfighter with all three systems. The Firefinder and LCMR are deployed to Afghanistan supporting operations associated with *Operation Enduring Freedom*. The Marine Corps recently procured and fielded an additional 22 Firefinder radar systems to support expanded requirements. These procurements supported an increased Approved Acquisition Objective (AAO) for the Firefinder from 22 to 44 systems. The LCMR was procured and fielded under an AAP as a solution for an approved Urgent Universal Needs Statement, with an AAO of 46 systems. Procurements for both the Firefinder and LCMR were funded using Overseas Contingency Operations supplemental procurement funding. The AAO for the TPS is seven sets, two for each active-duty artillery regiment and one for the Reserve Component. Full Operational Capability for the TPS occurred in September 2011.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:

AFATDS: Raytheon, Ft Wayne, IN



## ESCALATION OF FORCE-MISSION MODULE (EoF-MM)

### DESCRIPTION

The Escalation of Force-Mission Module (EoF-MM) consists of multifunctional, non-lethal systems and force protection equipment needed to minimize friendly and civilian casualties. The EoF-MM is the replacement of the in-service Non-Lethal Capability Sets (NLCS) and Force Protection Capability Sets (FPCS) procured in the 1990s and 2000s.

The EoF-MM consists of selected equipment that is used during escalation of force situations. The equipment and supplies contained in the EoF-MM allow the Marine to accomplish several different tasks in direct support of defined Marine Corps missions.

The EoF-MM consists of commercial-off-the-shelf (COTS) and government-off-the shelf (GOTS) equipment. The COTS/GOTS equipment is configured into capability groups, capability modules, and equipment sets. The groupings and modules define the location of the COTS/GOTS within the containers. The grouping and module structure will facilitate easier transport by tailoring to the mission demands and replacing and adding of new technologies.

The EoF-MM consists of three capability groups, ten capability modules. Each module consists of specific equipment necessary to support that module's capability mission. The modules are configured to fit within four Quadcon containers.

### OPERATIONAL IMPACT

The EoF-MM provides the appropriate equipment to employ a variety of non-lethal tactics and conduct a range of non-lethal operations. The fielding of the EoF-MM to the operating forces is intended to augment and complement existing lethal capabilities.

Capability Groups	Capability Modules
Checkpoint Group	Vehicle Check Point
	Entry Control Point
	Urban Patrol
	Establish and Secure Perimeter
	Convoy Security
	Clear Facilities
Crowd Control Group	Conduct Cordon
	Crowd Control
	Detain Personnel and Conduct Search
Training Group	Training

### PROGRAM STATUS

The EoF-MM program is currently in the Operation and Support phase. However, due to the operational need for additional systems, the program will return to the Production and Deployment phase in order to procure an additional 40 systems. The award of a contact should occur in the third quarter of FY 2012.

Procurement Profile:	FY 13	FY 14
Quantity:	20	20

Developer/Manufacturer: TBD



## SECTION 5: COMMAND AND CONTROL/ SITUATIONAL AWARENESS (C2/SA)



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## INTRODUCTION

The Marine Corps Command and Control (C2) Initial Capabilities Document (ICD), approved by the Joint Requirements Oversight Council in February 2008, and the Marine Corps Functional Concept for C2, approved in 2009, incorporate joint integrating concepts and C2 mandates. Together, they articulate our goal of delivering end-to-end, fully integrated, cross-functional capability, including forward-deployed and reach-back functions. They emphasize that C2 must be leader-centric and network-enabled, and that individual Marines must understand their commander's intent and be able to carry out complex operations. The C2 ICD, Functional Concept, and the Marine Corps Information Enterprise strategy described in this section will enable Marine Air Ground Task Force (MAGTF) commanders to exercise effective C2 and bring together all warfighting functions into an effective fighting force. In addition, these programs support the ability of the MAGTFs to function in an integrated naval environment and participate in or lead joint and multinational operations.

## AVIATION COMMAND AND CONTROL (AC2) FAMILY OF SYSTEMS (FOS) AND MARINE AIR COMMAND AND CONTROL SYSTEM (MACCS) FOS SUSTAINMENT

### DESCRIPTION

The AC2 FoS and the MACCS FoS sustainment efforts support the systems employed by Marine Air Command and Control System tactical agencies and operational facilities. Each MACCS agency performs different functions and tasks and using different equipment suites fielded and supported by squadrons within the Marine Air Control Group (MACG) in support of the Aviation Combat Element. The tactical agencies are the Tactical Air Command Center (TACC), the Tactical Air Operations Center (TAOC), and the Direct Air Support Center (DASC).

The core future AC2 FoS consists of the following systems:

- Common Aviation Command and Control System (CAC2S), which achieved IOC in FY 2012 for phase 1
- Ground/Air Task Oriented Radar (G/ATOR), which will achieve IOC in FY 2016
- Composite Tracking Network, which achieved IOC in FY 2011)
- AN/TPS-59 radar, which is already fielded

The current MACCS FoS is in the operations and support life cycle phase and will be replaced by CAC2S phase 2:

- TYQ-23(V)4 Tactical Air Operations Module (TAOM)
- TSQ-269 Mobile TAOM (MTAOM)
- TYQ-101 Communications Data Link System (CDLS)
- MRQ-12(V)4 Communications Interface System (CIS)
- TYQ-87(V)2 Sector Anti Air Warfare Facility (SAAWF)
- UYQ-3B Direct Air Support Center/Airborne System (DASC/AS)

- MSQ-124 Air Defense Communications Platform (ADCP)
- URC-107(V)10 Joint Tactical Information Distribution System (JTIDS) Terminal

In addition to the core MACCS FoS, the FoS Sustainment Project Office has management responsibilities for the following equipment that will not be replaced by CAC2S:

- Link Management System Multi-Tactical Data Link (LMS-MT)
- GRC-171B(V)4 Ultra High Frequency (UHF) Radio
- USQ-140(V)11(C) Multifunctional Information Distribution System (MIDS) Low Volume Terminal (LVT),
- TYQ-145 Beyond Line of Sight Gateway (BLOS-GW)
- GRC-256 High Frequency Radio

The MACCS FoS is responsible for one program that is in the deployment (as well as the O&S) phase. The TSQ-269 MTAOM achieved Initial Operational Capability in November 2011, with fielding continuing throughout FY 2012.

### OPERATIONAL IMPACT

The MACCS FoS Sustainment Project Office ensures these systems, supporting the TACC, TAOC, and DASC, remain ready, relevant, and capable until Full Operational Capability of CAC2S is achieved in 2018. This is accomplished through selected engineering initiatives, software sustainment, and maintenance of the appropriate logistics resources.

### PROGRAM STATUS

The re-baselined CAC2S program schedule has impacted all projected MACCS FoS support requirements and program funding. The MACCS FoS item-exit dates have been extended. Currently, the MACCS FoS will remain fielded through the end of calendar year 2018.



## GLOBAL COMMAND AND CONTROL SYSTEM-TACTICAL COMBAT OPERATIONS (GCCS-TCO) SYSTEM



### DESCRIPTION

The GCCS uses joint system-of-record software to provide select command-and-control capabilities throughout the Marine Corps. These capabilities facilitate the planning, execution, and management of operations, including unit readiness reporting of personnel, equipment, and training. Planning, executing, and managing operations is done via the Joint Operations Planning and Execution System, and unit readiness reporting is done via the Global Status of Resources and Training System (GSORTS). GCCS is fielded at the regiment and above echelons of command. TCO is the principle tool within the Marine Air-Ground Task Force for generating situational awareness through the distribution of the Common Tactical Picture (CTP). TCO also is the primary entry point for the joint-level Common Operational Picture (COP). TCO provides commanders at all echelons with the ability to map and display friendly and enemy locations, as well as plan, develop, display, and transmit overlays of intended movement. TCO also provides commanders the ability to receive, fuse, store, develop, transmit, and display commander's critical information requirements.

### OPERATIONAL IMPACT

GCCS is the joint command and control system that provides commanders with the information and capability to plan, execute, and manage operations, as well as the capability to report unit readiness. TCO provides the access and ability to contribute to the situational awareness provided by the CTP and COP, both internally to the Marine Corps and within the joint community.

### PROGRAM STATUS

The GCCS program has reached the Approved Acquisition Object of 194 servers and 320 clients. GCCS is in the sustainment phase of its acquisition lifecycle. GCCS capabilities will be combined with the Joint Tactical Common Operational Picture Workstation in FY14, and the GCCS program will merge with TCO.

TCO is in the sustainment phase of its acquisition lifecycle, having reached Full Operational Capability in 1996. TCO will continue to sustain software upgrades across the Future Year Defense Plan as well as Marine Corps-wide hardware upgrade of both the Tactical Common Operational Picture Server and the Intelligence Operations Workstation Version 1 client in FY 2013.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
Defense Information Systems Agency (DISA),  
Falls Church, VA

## COMMON AVIATION COMMAND AND CONTROL SYSTEM (CAC2S)



### DESCRIPTION

CAC2S will provide a complete and coordinated modernization of Marine Air Command and Control System (MACCS) equipment. CAC2S will replace current dissimilar systems and provide the Marine Air-Ground Task Force Aviation Combat Element (MAGTF ACE) with the necessary hardware, software, and facilities to effectively command, control, and coordinate air operations integrated with naval, joint, and combined command and control units. CAC2S will be comprised of standardized modular and scalable tactical facilities, hardware, and software that will significantly increase battlefield mobility and reduce the physical size and logistical footprint of the MACCS.

### OPERATIONAL IMPACT

CAC2S is an Acquisition Category IAC, Major Automated Information System program. It has been restructured with a revised acquisition strategy to ensure the CAC2S program fields' ready and proven technologies at the earliest opportunity. To achieve this goal, Increment I requirements will be achieved in two phases.

Phase 1 accommodates rapid fielding of operationally relevant capabilities, including mobility, situational awareness, tactical communications, information dissemination, and operational flexibility that will establish the baseline CAC2S capabilities. This phase will upgrade fielded MACCS equipment with mature,

ready technologies and will establish an initial product baseline Processing and Display Subsystem (PDS) and Communications Subsystem (CS). Naval Surface Warfare Center, Crane, Indiana, will oversee the integration and upgrades of the previously developed and fielded systems (e.g., AN/TSQ-239 COC and AN/MRQ-12) into CAC2S PDS and CS.

Phase 2 has been structured to accommodate the integration of technologies necessary for the CAC2S Sensor Data Subsystem (SDS) to meet remaining ACE battle management and command and control requirements. This phase will build upon the capabilities of the Phase 1 product baseline by integrating the SDS with the Phase 1 PDS into a single subsystem (Aviation Command & Control Subsystem (AC2S) and with the CS, thereby fully meeting CAC2S Increment I requirements.

### PROGRAM STATUS

CAC2S requirements were originally documented in an Operational Requirements Document in February 2003. The CAC2S requirements were further refined in a Capability Production Document and approved by the Joint Requirements Oversight Council in September 2007.

The program was designated a MAIS program on December 26, 2007, and elevated to an ACAT IAC. CAC2S Phase 1 successfully completed its Initial Operational Test and Evaluation in the third quarter of FY 2011. Subsequently, Phase 1 received its Full Deployment Decision in the fourth quarter of FY 2011 and Limited Deployment Capability (LDC) in February 2012. Phase 2 is currently in the Engineering and Manufacturing Development (EMD) phase with a Milestone C decision anticipated in the fourth quarter of FY 2014. The AAO for CAC2S Increment I is 50 AC2S, and 75 CS. Initial Operational Capability (IOC) for Phase 1 commenced 17 January 2012 with the first operational unit (MASS-3) at Camp Pendleton, CA, followed by 2d Marine Aircraft Wing (2d MAW), Cherry Point, NC, in August 2012.

## THEATER BATTLE MANAGEMENT CORE SYSTEMS (TBMCS)

### DESCRIPTION

TBMCS is an air war-planning tool mandated by the Chairman of the Joint Chiefs of Staff for the generation, dissemination, and execution of the Air Tasking Order/Airspace Control Order (ATO/ACO). The host system resides with the Aviation Command Element in the Tactical Air Command Center (TACC) with remote systems located throughout the Marine Air-Ground Task Force to enable dynamic mission updates.

### OPERATIONAL IMPACT

TBMCS is the principal aviation command and control tool within Marine aviation C2 systems and the Theater Air Ground System for the development and execution of the ATO. It is a key system that supports ATO planning and development and provides the automated tools necessary to generate, disseminate, and execute the ATO/ACO in joint, coalition, and Marine Corps-only contingencies.

### PROGRAM STATUS

The USAF placed TBMCS into sustainment in 2007 following the release of version 1.1.3 which is now fielded throughout the operating forces and the joint community. The USAF Program Office (PO), in conjunction with the USN, USA and USMC Program Offices continue to sustain version 1.1.3 while planning for the eventual transition to a new system of record which the USAF PO is currently working on with the joint community. The Marine Corps PO has fielded TBMCS Maintenance Release (MR) 1/Service Pack (SP) 27, which provides key assault support enhancements for both planning and execution, and is in the final process of testing and approval for release of TBMCS MR2/SP1 which will provide USMC users with operating system and hardware upgrades.

## COMBAT OPERATIONS CENTER (COC)



### DESCRIPTION

The COC is a deployable, self-contained, centralized facility that provides shared command and control and situational awareness functionalities in a collaborative environment. The system is designed to enhance the tactical common operational picture for all levels of the Marine Air Ground Task Force (MAGTF). It is a commercial-off-the-shelf, total turn-key, integrated hardware solution using unit-provided radios, legacy and re-hosted tactical data applications, and prime movers to provide mobility, modularity, and scalability for each assigned mission. From 1996 to 2011 there were three COC system variants (V) in production — the (V)2, (V)3, and (V)4 — scaled to the major subordinate command, the regiment/group, and the battalion/squadron, respectively. COC supports the MAGTF throughout the full range of military operations and enables critical warfighting functions: Command and Control (C2), intelligence, maneuver, fires, force protection, and logistics.

The COC program office is upgrading the existing COCs to introduce an enhanced, integrated software baseline supporting warfighter needs, the COC C2 Software Package. Based on service oriented architecture principles, this baseline will enable existing Tactical Data Systems (TDS) to share their data, producing an identical common tactical picture. To support such a robust software capability, the COC program will field a major hardware refresh in FY 2013 and FY 2014.

This hardware upgrade will be provided to support virtualization of COC software and the fielding of the COC C2 Software Package in FY 2012. The COC C2 Software Package is derived from the Tactical Service Oriented Architecture (TSOA), which is a set of reusable software components that can be used anywhere in the Marine Corps. These components are built to a newly defined MAGTF C2 Software Architecture that establishes the foundation for C2. The processes, patterns, practices used to develop components for the TSOA are described by the Expeditionary Software Development System. The deployment of Rapid Response Integration Teams to units in the fleet will directly support tailored, rapid application development.

**OPERATIONAL IMPACT**

COCs have been deployed to *Operation Iraqi Freedom* and *Operation Enduring Freedom*, as well as many other operational exercises and missions around the globe. COCs provide capabilities to present, display, and communicate the commander’s intent and required information in support of expeditionary maneuver warfare and all aspects of mid-intensity warfare. COC’s integration of commercial- and government-off-the-shelf technologies shorten the decision making cycle by providing intelligence and information on friendly and enemy locations and activities in a consolidated, easily recognizable video display viewed simultaneously by all staff functions within the COC complex.

**PROGRAM STATUS**

The current Approved Acquisition Objective for all COC Variants is 309. The AN/TSQ-239 (V) 2, 3, and 4 reached Full Operational Capability in December 2011. (V) 2-4 are post-full-rate production and are in the operations and support phase of the acquisition life cycle. The COC program will continue to incorporate engineering changes and equipment technical refresh and insertion in order to address operational requirements for improved technical capabilities and new system in-

terface requirements.

The COC (V)1, Marine Expeditionary Force level variant, is a new start Abbreviated Acquisition Program currently in production and uses the Deployable Joint Command and Control system as a baseline for the materiel solution. Three systems are allocated for procurement, one for each MEF. Initial Operational Capability will occur in FY 2014.

Procurement Profile:	FY 13	FY 14
Quantity:		
(V)1:	3	0

Developer/Manufacturer:

(V)2/3/4: General Dynamics C4 Systems, Scottsdale, AZ

(V)1: Naval Surface Warfare Center, Panama City Division, FL

**GROUND-BASED OPERATIONAL SURVEILLANCE SYSTEM EXPEDITIONARY (G-BOSS(E))**

**DESCRIPTION**

The G-BOSS(E) provides organic, around-the-clock persistent surveillance capabilities through the use of multi-spectral sensors and ground-surveillance radars configured on three distinct, mobile and flexible (heavy, medium, and light) platforms supporting an array of missions. All three variants can be employed by any size Marine Air-Ground Task Force, or elements within the MAGTF, in order to expand a commander’s view of the battlespace. Sensor-derived information can be shared internally between sensor nodes and relayed to the Combat Operations Center (COC) for further analysis and sharing across the Global Information Grid. Information can be forwarded to intelligence, operations, and fire-support agencies or used organically as real-time actionable intelligence.

### OPERATIONAL IMPACT

This will be a Marine Expeditionary Force (MEF)-level asset to be employed by the lower echelon units based on the assigned mission. The system allows for operation at permanent installations, forward operating bases (FOBs), combat outposts, and temporary tactical locations to observe the perimeter, avenues of approach, and/or areas of interest. Larger long-term FOBs and combat outposts will rely upon the heavy variant for long-range and close-in surveillance to observe areas and avenues of potential enemy approach. The medium (light trailer transportable) and light (man-transportable) variants will provide company-size maneuver elements with surveillance and detection capabilities at smaller, short-term tactical locations.

### PROGRAM STATUS

The G-BOSS family of systems is employed by the Marine Corps in *Operation Enduring Freedom*, based upon numerous Urgent Universal Need Statements. The G-BOSS Program Office is procuring and delivering G-BOSS Tower, G-BOSS Lite, and Cerberus Lite systems to theater while continuing to move forward on the transition to the G-BOSS(E) Acquisition Program that will consist of a mix of the heavy, medium, and light variants. The G-BOSS(E) Initial Operational Capability is scheduled for FY 2015 and Full Operational Capability is scheduled for FY 2019.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
 NSWC Crane Division, Crane, IN  
 DRS Technologies, Parsippany, NJ  
 Argon ST, Fairfax, VA  
 MTEQ, Kilmarnock, VA  
 FLIR Systems Inc., Wilsonville, OR



## SECTION 6: EXPEDITIONARY ENERGY



## INTRODUCTION

“The current and future operating environment requires an expeditionary mindset geared toward increased efficiency and reduced consumption, which will make our forces lighter and faster.”

*Gen James F. Amos  
Commandant, U.S. Marine Corps*

In 2011 the Commandant called on the Marine Corps to change the way we think about energy as we man, train, and equip our expeditionary force. As a Corps, we recognize that over the last ten years of combat, we have become more lethal, but have become critically dependent on fuel and batteries, putting our expeditionary capabilities and Marines at risk. Yet, the current and future security environment demands a “middle weight force,” flexible to respond to a host of threats at a moment’s notice, and able to sustain itself for significant periods, at a time and place of its choosing. *Modernizing our capabilities in expeditionary energy is critical to maintaining operational capabilities and readiness of the Force, for today’s fight and tomorrow’s conflicts.*

In March 2011 the Commandant issued the *Marine Corps Expeditionary Energy Strategy and Implementation Plan (Strategy)* with the goal of increasing our combat effectiveness through ethos, efficiency and renewable energy—from “Bases to Battlefield.” The goal of the Strategy is simple: a lighter, faster and more lethal force, which goes farther and stays longer on every gallon of fuel, every kilowatt of energy it requires. Specifically, the Strategy directs the Marine Corps, by 2025, to create a Marine Air Ground Task Force (MAGTF) capable of maneuvering from the sea, and only requiring liquid fuel for mobility systems once ashore. This means C4I and life support systems will be powered by alternative and renewable energy and our vehicles will power larger ground systems when required. Recognizing that to achieve this bold vision would require institutional change, the Marine Corps put in place a framework to guide our efforts: the *Strategy, the Expeditionary Energy, Water, and Waste Capabilities Based Assessment and Initial Capabilities Document (E2W2 CBA/ICD)*, together with the 2012 Marine Corps Science and Technology Strategic Plan provide an investment plan to drive modernization in expeditionary energy.

## EXPEDITIONARY ENERGY: FROM BASES TO BATTLEFIELD



### THE FUTURE FORCE

One of the Commandant's six critical pillars of modernization for the Corps, Marine Corps investments in energy efficient equipment and renewable energy are essential to building a lighter, more capable MAGTF. Translating into greater military capability, these investments mean increased tactical and operational tempo, and reduced vulnerabilities during resupply. In short, they can mean the difference between reaching "Baghdad" or waiting for resupply. They save Marines time, with more focus on the enemy and less time spent planning and executing sustainment missions. Most importantly, by investing in training Marines we are reinforcing our expeditionary mindset, teaching Marines that resource efficiency is a force multiplier that increases combat effectiveness.

### REQUIREMENTS

In September 2011, the Assistant Commandant of the Marine Corps signed a comprehensive requirements document to guide our investments in our equipment and our people: the E2W2 CBA/ICD. This document provides the analytical framework for developing the solutions to build the future force. The E2W2 CBA/ICD identifies 152 gaps, including materiel and non-materiel gaps, and together with the Strategy, provides a prioritized roadmap that the Marine Corps

is using to systematically focus investments and drive combat development.

Catalyzing the next generation of capabilities, the Marine Corps 2012 Science and Technology Strategic Plan is the third element of our framework. It identifies six priority areas to lead turn the S&T enterprise: (1) expeditionary energy harvesting; (2) temperature-independent electronics; (3) expeditionary water harvesting; (4) energy-efficient, combat-effective mobility; (5) optimized personnel performance; and (6) energy storage other than liquid.

### EXPERIMENTAL FORWARD OPERATING BASE

In November 2009, the Deputy Commandant for Combat Development and Integration established the Experimental Forward Operating Base (ExFOB) to identify, evaluate, and accelerate the Marine Corps materiel solutions to achieve the mission of the Strategy. ExFOB brings together stakeholders from across the Marine Corps requirements, acquisitions, and science and technology-development communities to systematically focus on capability gaps identified in the E2W2 CBA/ICD. A semi-annual event, ExFOB invites industry to demonstrate off-the-shelf technologies with potential to address Marine Corps needs. Promising technologies are put into the hands of Marines for extended user evaluation under combat and training conditions. Qualitative and quantitative data collected during ExFOB inform requirements, reduce investment risk, and build Marines' confidence in new capabilities.

ExFOB has taken new capabilities "from concept to combat" in less than a year—twice. In 2010 ExFOB sourced commercial and Marine Corps technologies, trained an infantry company with renewable energy systems, and deployed them to Afghanistan in winter 2010. Marines learned that these capabilities could reduce risk and increase effectiveness at the forward operating edge, such as enabling a foot patrol to operate for three weeks without battery resupply, operating



patrol bases entirely on renewable energy, and dramatically reducing fuel demand at a company outpost. In summer 2011, Marines evaluated ExFOB's hybrid power solutions and efficient air conditioners at Patrol Base Boldak in Afghanistan. This effort tackled our largest ground power user — command and control operations — and enabled a leap forward in our understanding of the military requirement for hybrid power. In 2012, the Marine Corps put this knowledge to work in preparing the Analysis of Alternatives for hybrid energy systems, a critical benchmark in accelerating the acquisition of an entirely new means of powering the force.

Since 2010 ExFOB has:

- Reviewed over 280 technologies
- Evaluated over 75 technologies at ExFOB demonstrations
- Purchased and deployed 11 different technologies to combat in Afghanistan
- Transitioned 4 Technologies to Programs of Record
- Led the requirements development of battlefield hybrid power
- Collaborated with industry to develop high efficiency flexible solar
- Collaborated with industry to develop small unit water purification systems
- Integrated and evaluated fuel saving auxiliary power units for combat logistics vehicles
- Informed \$352M in USMC investment and interests within HQMC processes and within the Expeditionary Force Development System.

### BASES TO BATTLEFIELD

The Strategy recognized that because Marines live, train, and fight as an expeditionary force, it is essential to foster energy efficient habits at our bases that Marines will translate to the battlefield. At installations, the Marine Corps has made real progress in harness-

ing renewable energy resources and building more efficient buildings and systems to drive down energy costs. To achieve the Commandant's vision of an energy-efficient, combat effective Marine Corps, every unit and every Marine at our bases and stations, including our civilian Marines and our family members, must make energy a priority. A culture that values resources and increases energy efficiency at our installations will strengthen the readiness and capability of our force.

### THE EXPEDITIONARY ENERGY OFFICE (E<sup>2</sup>O)

Established in October 2009, the USMC Expeditionary Energy Office (E2O) is responsible for analyzing, developing, and directing Marine Corps energy strategy “in order to optimize expeditionary capabilities across all warfighting functions.” E2O, a Director-level office within Headquarters Marine Corps (HQMC) reporting to the Assistant Commandant, works closely with the combat and technology development communities. E2O serves as the Proponent for Expeditionary Energy in the force development process. Additionally, E2O is tasked with advising the Marine Requirements Oversight Council (MROC) on all energy and resource-related requirements, acquisitions, and programmatic decisions. And, in accordance with the National Defense Authorization Act for Fiscal Year 2009, the Secretary of the Navy assigned the E2O responsibilities as the Marine Corps Senior Official for Operational Energy.

### PROGRAM INVESTMENTS

Our investments are focused on supporting Marines in combat today, but also on increasing the combat effectiveness of the future force. We are driving energy performance considerations into the acquisition and requirements processes, improving new and legacy systems as well as future upgrades.

We calculate our “Return on Investment” in terms of military capability gained through dramatic savings

in weight and fuel transported. For example, within the FYDP, we expect our investments to improve the energy effectiveness of our Marine Expeditionary Brigades (MEB) by about 9 percent. We estimate that the future MEB, over a 365 day operation, will be able to operate one month longer on the same amount of fuel that it demands today. It will need 208 fewer fuel trucks, thereby saving seven million pounds of fuel per year.

Initial investments in current programs and new areas put us on track to achieve the mission of the Strategy by 2025. They include:

- Accelerating expeditionary energy systems — Solar Portable Alternative Communications Energy System (SPACES) and Ground Renewable Expeditionary Energy Network Systems (GREENS) — to Afghanistan (complete in March 2012), and the Fleet Forces
- Implementing mobile electric power sources to achieve ~22 percent fuel efficiency across the fleet of systems (Army funded development and USMC funded procurement)
- Fielding Enhanced Efficiency Environmental Control Units (E3CU) to achieve ~15-25 percent improved fuel efficiency beginning in 2012, with the next-generation family of ECUs entering service in 2014
- Developing fuel economy improvements for Medium Tactical Vehicle Replacement (MTVR) vehicles, anticipating 15 percent increased efficiency
- Executing ExFOB demonstrations twice a year
- Exercising and training renewable energy systems at events including Steel Knight 2012, Weapons Tactics Instructors Course, and Enhanced Mohave Viper
- Improving expeditionary energy modeling and simulation capability to guide future program investments across the MAGTF
- Training in expeditionary energy ethos for entry-level Marines; developing improved training and education that includes ethos, energy planning, management, production, distribution and storage concepts and practices
- Supporting a Naval Postgraduate School multi-disciplinary student research program in expeditionary energy, beginning fall of 2012

These and future efforts are guided by formal requirements, which include:

- *USMC E2W2 CBA/ICD*
- *Urgent Statement of Needs for Energy-Efficient Lighting for Expeditionary Shelter System*
- *Urgent Statement of Needs for Expeditionary Shelter System Energy-Efficient Insulating Liner*
- *Urgent Statement of Needs for the Solar Portable Alternative Communications Energy System and Ground Renewable Expeditionary Energy Network Systems*
- Energy Efficiency Key Performance Parameter included in Ground-Based Optical Surveillance System (Expeditionary) Capability Development Document
- *MAGTF Expeditionary Hybrid Power System (MEHPS) Analysis of Alternatives*

“Transforming the way we use energy is essential to rebalance our Corps and prepare it for the future.”

*Gen James F. Amos  
Commandant, U.S. Marine Corps*





# SECTION 7: MARINE CORPS INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE ENTERPRISE (MCISRE)



## INTRODUCTION

Marine Corps Intelligence is more than support to operations — it is continuous operations, oriented on global, dynamic threats as well as security cooperation engagements necessary to enable prudent action in pursuit of national interests. The MCISRE is an innovative, operational approach to the intelligence warfighting function, providing timely, reliable, and understandable intelligence information that forms the basis of Marine Corps planning and operations. The multi-domain, collaborative, worldwide construct of the MCISRE provides the crucial operational edge required for Marine Corps forces.

The MCISRE is not driven by the crisis of the moment. Rather, it is a “24/7/365” predictive analysis process with the global reach of operational Marine Expeditionary Force (MEF) Intelligence Centers (MICs) backed by the Marine Corps Intelligence Activity (MCIA) and its connectivity to the Combat Support Agencies (CSAs) and National Intelligence Community (IC). To ensure its viability, Marine Corps Intelligence will continue to evolve and maintain vigilance over a complex, technically sophisticated threat environment by seizing technological opportunities to increase MCISRE capabilities and capacities.

## TODAY

The MCISRE supports the Marine Corps intelligence unity of effort across the air, ground, maritime, and cyberspace domains. This strategy synchronizes current USMC intelligence programs, units, and personnel at every echelon across the operating forces and supporting establishment to enable collaboration and sharing of all information and federated intelligence in support of the Marine Air Ground Task Force (MAGTF).

To date, the MCISRE strategy continues implementing an enterprise solution in which all ISR functions, sources, and methods across the total force are leveraged and shared for operational success. A major milestone has been the creation of MICs that enable MEF units to train as they fight by providing analytical and intelligence production support from garrison locations to deployed forces, supporting the Commandant’s “Lighten the MAGTF” initiative as well as reducing the required number of forward-deployed personnel. Other major advances include the creation of the Headquarters, Marine Corps Intelligence Department Technology Innovation Division led by the Enterprise Chief Technology Officer, a comprehensive intelligence professionalization program across the Enterprise, and advanced analytic training, methods, and tools



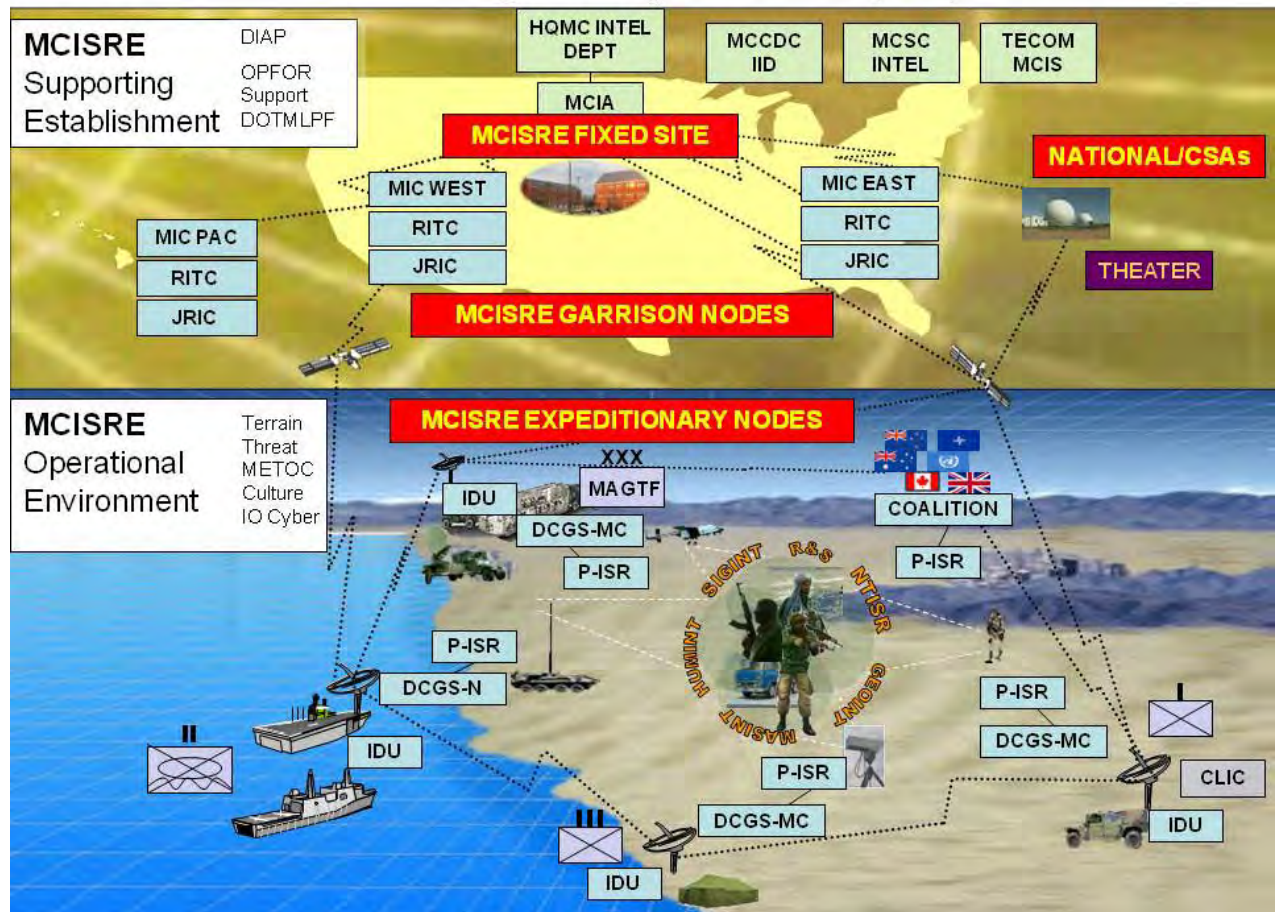
that enable standardized, collaborative predictive analysis across the Enterprise.

These recent advances place ISR capability and capacity at all echelons throughout the total force integrating intelligence information to respond to and reduce uncertainty within complex threat environments. As budgets decrease and global threats multiply, the MCISRE embraces operational flexibility through adaptive responses in operating concepts, doctrine, training, and equipment.

**TOMORROW**

When fully implemented, the MCISRE will provide each component element access to shared knowledge, data, resources, and expertise from across the enterprise, as well as joint, national, and contributing partner agencies. The ability to “See,” “Understand,” and “Act” enables a highly trained, networked, and analytically astute intelligence force to enhance decision-making at all echelons, while meeting intelligence quality and information-sharing standards required by Department of Defense (DoD) and National Intelligence Directives.

**MCISRE HIGH-LEVEL OPERATIONAL VIEW (OV-1)**





## MCISRE CONSTRUCT

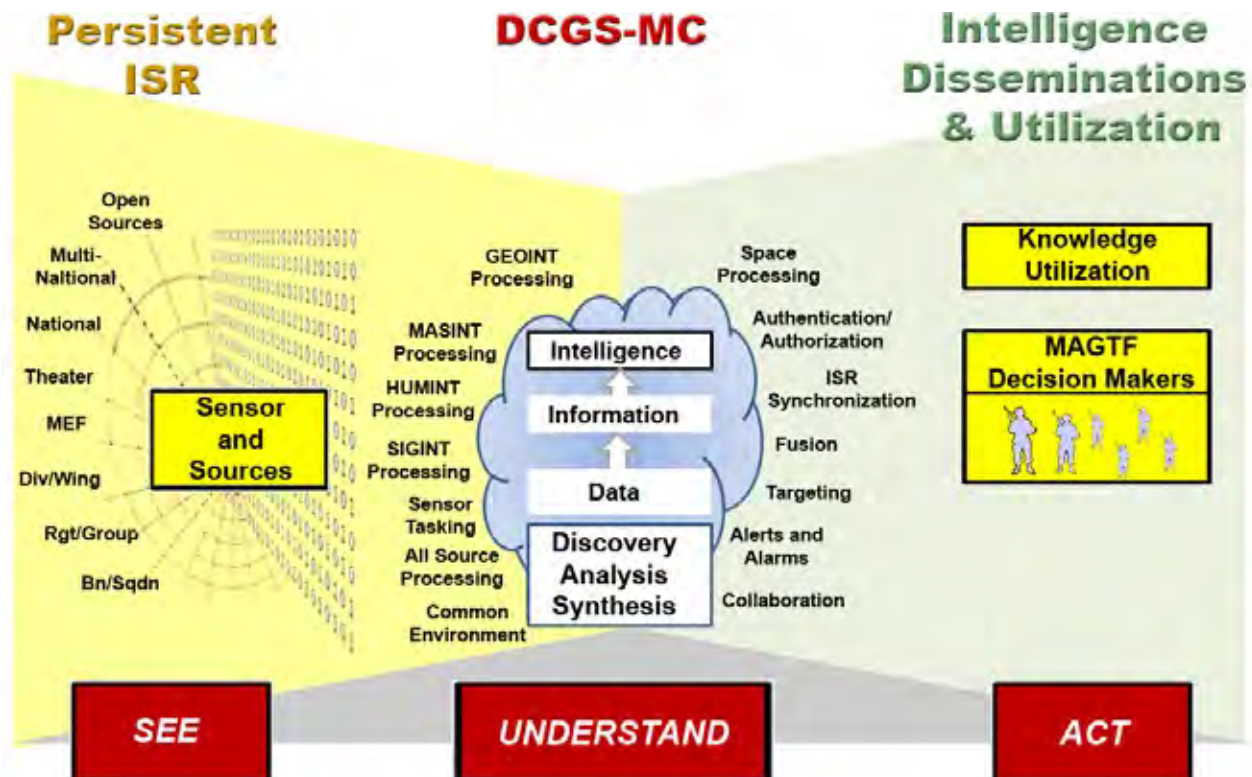
**Fixed Site:** The MCISRE Fixed Site is managed by the MCIA in Quantico, Virginia. It serves as the Marine Corps principal connection to national agencies and exposes all USMC ISR data to the IC. The fixed site is the primary enterprise data storage and archival site and serves as the primary reach-back site for Garrison Nodes.

**Garrison Nodes:** MICs are operationalizing garrison capacity in support of operational forces worldwide. They serve as critical reach-back nodes for expeditionary forces. The MICs conduct intelligence planning, analysis, and production in collaboration with MCIA, expeditionary forces, or designated joint force elements. These reach-back sites are located at each of the three MEFs and are capable of supporting forward operations from garrison or deploying to augment tactical, expeditionary nodes.

**Expeditionary Nodes:** Expeditionary nodes are deployed with the MAGTF. They are scalable, aligned to the mission, and provide intelligence planning, direction, collection, analysis, production, and dissemination of intelligence and combat information to the MAGTF and joint forces.

## OPERATIONAL OVERVIEW

The MCISRE is built on three core pillars to support MAGTF intelligence requirements in both garrison and deployed environments: (1) Persistent ISR (P-ISR) enables the MAGTF to “See”; (2) Distributed Common Ground System–Marine Corps Enterprise (DCGS-MC) enables intelligence professionals to “Understand”; and (3) Intelligence, Dissemination, and Utilization (IDU) enables the MAGTF to “Act.” Individual components of these pillars are further described under Chapter 3, Pillar 5, Section 6: Intelligence, Surveillance, and Reconnaissance Systems and Equipment.





**“See” with Persistent-ISR:** P-ISR provides the means for intelligence planning, directing, and collecting. Through P-ISR, the Marine Corps is building a holistic intelligence-collection strategy that leverages joint and national ISR assets to augment organic battlefield sensors. The P-ISR strategy synchronizes organic MAGTF ISR collection assets with support from joint and CSA resources to provide leaders at all echelons the ability to use intelligence and combat information.

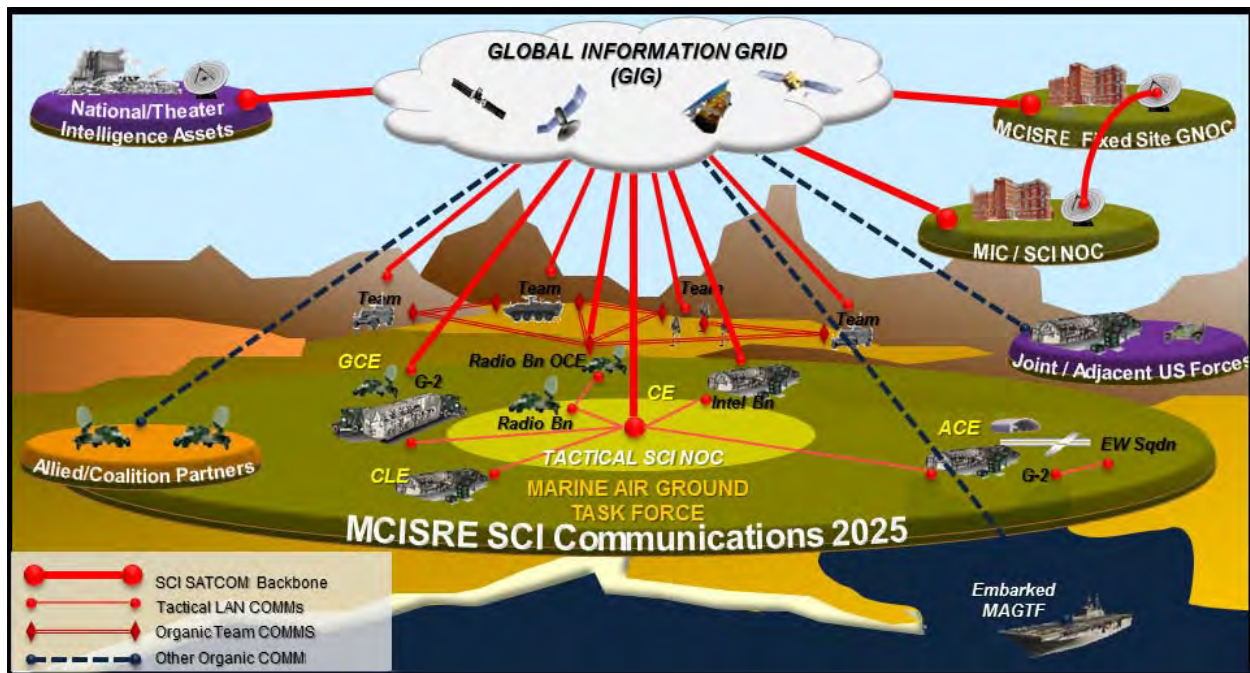
**“Understand” with Distributed Common Ground System–Marine Corps Enterprise (DCGS-MC) Enterprise:** DCGS-MC provides the foundation to expose and discover data from a multitude of geospatial intelligence (GEOINT), human intelligence (HUMINT), signals intelligence (SIGINT), and





other sources to provide all-source intelligence production. DCGS-MC is the USMC component of the DoD DCGS Enterprise that performs all aspects of MCISRE data processing, exploitation, exposure, discovery, analysis, and production. DCGS-MC consists of a family of systems that is scalable, modular, and tactically deployable. The DCGS-MC Enterprise comprises the DCGS-MC program of record and several other programs. This critical capability increases the amount and precision of information and intelligence made available to operators, decision-makers and intelligence professionals across and at all echelons of the MAGTF.

**“Act” with IDU:** The Intelligence Dissemination and Utilization (IDU) concept strives not only to deliver intelligence, but also to integrate it with operations and planning. IDU includes the systems, people, and processes associated with dissemination, integration, use, and evaluation of intelligence. The IDU concept enables precise action and the prudent re-tasking of P-ISR capabilities. IDU is the act of identifying and conveying relevant combat information and intelligence to satisfy MAGTF intelligence requirements. IDU incorporates continuous feedback to ensure the right combat information and intelligence is delivered to the right consumer at the right time. IDU comprises those capabilities associated with the dissemination, integration, evaluation, and feedback steps of the Marine Corps intelligence process.



# SECTION 8: EXPEDITIONARY LOGISTICS





## INTRODUCTION

Logistics is a fundamental element of MAGTF expeditionary operations. The MAGTF expeditionary logistics capability supports a balanced, multi-capable force that is integral to the strategic direction described in Marine Corps Vision and Strategy 2025. Marine expeditionary forces are self-contained and self-sustained forces that have everything necessary to accomplish the mission – from individual equipment to expeditionary airfields and medical treatment facilities. These forces are structured to meet a wide range of contingency operations and possess the logistics capabilities needed to initiate an operation, sustain forces, and reconstitute for follow-on missions.

MAGTF Expeditionary Logistics includes the information systems, equipment, and processes to train, deploy, employ, and sustain Marine forces across the range of military operations. Enablers include:

- Electronic Maintenance Support System
- Family of Combat Field Feeding Systems
- Family of Field Medical Equipment
- Family of Power and Environmental Control Equipment

These are key for continuous MAGTF operations on a distributed battlefield. The Marine Corps vision of the future requires fundamental changes in the way we provide logistics support to our MAGTFs.

## ELECTRONIC MAINTENANCE SUPPORT SYSTEM (EMSS)

### DESCRIPTION

The Electronic Maintenance Support System (EMSS) is a key Marine Corps maintenance aid designed to enhance combat service support to Marine Air-Ground Task Forces while deployed or in garrison. EMSS consists of an electronic maintenance device (EMD) and server backbone. The EMD consists of a rugged, lightweight, one-man portable maintenance device that the maintainer can employ at the point of repair to interface with the equipment/system undergoing repair, view technical data, and document maintenance actions.

The EMD is capable of supporting multiple platforms and systems across maintenance communities and provides the necessary technical conduit to enable maintainers to gain access to the Global Information Grid via the EMSS server backbone. EMSS provides a means to archive and download maintenance data collected from the EMD, host maintenance applications, and provides easy access to authoritative technical data with automatic updates as changes occur. EMSS can operate in a connected, disconnected, and wireless mode and provide access to subject matter experts over USMC networks.

Additionally, EMSS provides reach back capability to SME/Program Office personnel to enhance and assist in maintenance of weapon systems and support equipment. EMSS is a critical enabler of logistic modernization efforts (Item Unique Identification and Condition Based Maintenance).

### OPERATIONAL IMPACT

EMSS provides ground maintenance personnel with an electronic decision support tool capable of wireless connectivity and access to web-based applications and technical data via Global Command Support System – Marine Corps, interactive electronic technical manuals, computer-based training, forms, and files. EMSS will reduce no-evidence of failure, lower

cost of maintenance, eliminate paper publications and assist the maintainer in becoming more effective and efficient by providing networked tools and electronic information, enabling sustained performance and readiness of Marine Corps weapon systems anywhere on the battlefield.

### PROGRAM STATUS

EMSS has received a full fielding decision for 2141, 2147 and 3521 military occupational specialties (MOSs). Fielding is 100 percent complete. Future efforts will field EMSS to the 11xx, 13xx, 28xx, 59xx MOSs.

Procurement Profile:	FY 13	FY 14
Quantity:	2,000	2,000

### Developer/Manufacturer:

Developer/Manufacturer: Special Projects Engineering and Research (SPEAR) Team, Naval Surface Warfare Center, Crane, IN (systems integrator)

## FAMILY OF FIELD MEDICAL EQUIPMENT (FFME)

### DESCRIPTION

The FFME consists of medical capability sets known as Authorized Medical Allowance Lists (AMALs), Authorized Dental Allowance Lists (ADALs), and medical kits. These sets provide the Marine Air-Ground Task Force commander with the health-care capabilities required to maintain the combat effectiveness of the force and safely stabilize and evacuate casualties from the battlefield. There are 30 different AMALs/ADAL and four medical kits fielded to Marine Corps units. AMALs, ADALs, and medical kits provide Medical Battalions, Dental Battalions, unit medical personnel, and individual Marines and Sailors with the equipment, consumables, and medicine required to treat patients in a field or combat environment.

### OPERATIONAL IMPACT

The type of FFME that supports the MAGTF includes forward resuscitative care, shock trauma, and first-responder capability sets that provide life-saving care as far forward on the battlefield as possible. In addition, FFME also includes preventive medicine capability sets designed to prevent the spread of disease. Loss of any of these capabilities would adversely affect health-care management throughout the Marine Corps and potentially result in the loss of life.

Each AMAL, ADAL, and medical kit is modeled by the Naval Health Research Center (NHRC), verified by subject matter experts, and stocked to reflect current casualty rates and protocols. Planned enhancements to FFME capability sets to improve the quality of health care provided to the warfighter include a Portable Patient Transport Life Support System, Infrascanner for the early detection of subdural hematomas, and the Mobile Anesthesia Delivery Module. Other efforts include joint research and development efforts for tourniquets and hematology analyzers.

### PROGRAM STATUS

A review with NHRC, HQMC, CD&I, MCSC, and subject matter experts is conducted on each AMAL, ADAL, and medical kit every four years. The AMAL/ADAL or medical kit is then updated with the latest state-of-the-art medical technology and reconfigured based on current casualty rates and protocols. New or updated equipment added to the AMAL, ADAL, or medical kit is fielded the year following a review with obsolete equipment being disposed of properly.

## MARINE CORPS FAMILY OF POWER AND ENVIRONMENTAL CONTROL EQUIPMENT

### DESCRIPTION

The Marine Corps Family of Power Equipment encompasses a portfolio program to procure, update, and replenish continuously more than 30,000 items of power equipment, including skid-mounted and trailer-mounted diesel generators, floodlights, power distribution sets, electrician toolkits, power supplies, radio power adaptors, battery chargers, renewable energy systems, and on-board vehicle power systems. The Marine Corps Family of Environmental Control Equipment continuously procures, updates, and replenishes more than 8,000 items that include tactically hardened Environmental Control Units, refrigerated containers, and refrigeration tool kits. Both families of equipment are used to support all command, ground combat, aviation, and logistics elements throughout the Marine Corps that require tactical power and environmental control in support of air control, communication/information systems, life support systems, and general power/heating-ventilation-air conditioning requirements. Paramount in each family is fielding Environmental Protection Agency-compliant equipment to meet stringent air quality and zero-ozone depleting standards, while maintaining military compatibility, energy efficiency, transportability, durability, and simplicity of operation.

### OPERATIONAL IMPACT

Procurement of these systems will ensure that the Command Element, Aviation Combat Element, Ground Combat Element, and Logistics Combat Element entities have the ability to support all requirements of the Marine Air Ground Task Force with deployable and energy efficient equipment.

**PROGRAM STATUS**

Within the families of power equipment and environmental control equipment, various items are replaced as determined appropriate by the life cycle manager, Product Manager, Expeditionary Power Systems. All items are managed as acquisition or abbreviated-acquisition programs, with multiple acquisition programs in progress at any point in time.

Procurement Profile:	FY 13	FY 14
Quantity:	5,400	5,250

- Developer/Manufacturer:
- Environmental Control Units: Hunter Defense, Geneva, OH
- Current Tactical Generators: Dewey Electronics, Oakland, NJ; DRS-Fermont, Bridgeport, CT;
- AMMPS Tactical Generators: ONAN Cummins, Minneapolis, MN
- Battery Chargers: Bren-tronics Inc., Commack, NY
- Battery Managers and Analyzers: PulseTech Corporation, Waco, TX
- Refrigerated Containers: SeaBox Inc., East Rutherford, NJ
- Cargo Containers: SeaBox Inc., East Rutherford, NJ; CMCI, Charleston, SC; and Garrett Container Company, Accident, MD
- Radio Power Adaptors: IRIS Technology, Irvine CA and Graywacke, Mansfield, OH
- Power Supplies: AMETEK, San Diego, CA
- Renewable Energy Systems: IRIS Technology, Irvine, CA; UEC Electronics, Hanahan, SC; and LM Engineering, Youngstown, OH
- Power Distribution: LEX Products, Shelton, CT
- Floodlights: Magnum Products, Berlin, WI
- Integrated Trailer, ECU and Generator: Magnum Products, Berlin, WI
- On-Board Vehicle Power System: Oshkosh Corp., Oshkosh, WI and DRS, Huntsville, AL

**FAMILY OF COMBAT FIELD FEEDING SYSTEMS**

**DESCRIPTION**

The CFFS team provides material solutions that give the Operating Forces the capability of feeding Marines and Sailors in an expeditionary environment.

The Expeditionary Field Kitchen (EFK) is a rapidly deployable, mobile, and fully self-sustaining kitchen capable of preparing a minimum of 500 meals up to three times per day. The EFK is configured within an 8-by-8 by 20-foot. International Organization for Standardization (ISO) container for transportation and is compatible with current and project Marine Corps transport assets (Medium Tactical Vehicle Replacement (MTVR) with MCC20 container trailer). The kitchen includes an array of food-serving equipment assembled in the expandable ISO container. The transition from shipment mode to operational mode includes placing mobile appliance units into a food preparation and sanitation configuration.

**OPERATIONAL IMPACT**

The EFK provides a mid-level feeding system to support expeditionary field mess operations as far forward as possible on the battlefield in support of the scheme of maneuver and logistical requirements of the Marine Air-Ground Task Force.

**PROGRAM STATUS**

The EFK is being fielded in FY 2013 and FY 2014 with expected Full Operational Capability scheduled during FY 2016.

Procurement Profile:	FY 13	FY 14
Quantity:		
EFK	72	34

Developer/Manufacturer:  
Sotera Defense Solutions, Easton, MD





# SECTION 9: PREPARING FOR TOMORROW'S FIGHT



## INTRODUCTION

We are preparing for tomorrow's fight in three critical areas: cyber warfare; special operations; and security cooperation. Modern armed forces cannot conduct high-tempo, effective operations without reliable information and communications networks and assured access to cyberspace and space. The Marine Corps Forces Cyberspace Command is the focus of our organic cyber capabilities and capacities needed to retain speed, precision, and lethality. The Marine Corps Special Operations Command is the Corps contribution to the U.S. Special Operations Command and maintains a shared heritage and strong bond with its parent service as "soldiers from the sea." The Marine Corps Security Cooperation Group capitalizes on our theater security cooperation and partnership activities with allies and partners, providing our leaders with strategic options to shape outcomes, prevent conflicts, strengthen "at-risk" states, and deny enemy safe-havens.

## MARINE CORPS SECURITY COOPERATION GROUP (MCSCG)

The Marine Corps Security Cooperation Group (MCSCG) achieved full operational capability in October 2012 as a unique command that consolidates all facets of security cooperation (SC) to include advisor skills, training and assessment expertise, and security assistance program management. MCSCG is commanded by a Marine colonel and has a total of 203 personnel organized into a headquarters staff, instructor group, and regionally aligned coordination, liaison, and assessment teams (CLATs). The command is assigned as a subordinate element of Marine Forces Command (MARFORCOM).

The MCSCG mission is to execute and enable security cooperation programs, training, planning, and activities in order to ensure unity of effort in support of USMC and Regional Marine Component Command (MARFOR) objectives and in coordination with operating forces and MAGTFs. These include assessments, planning support, SC related education and training, and advisory support to ensure the accomplishment of USMC and Regional Marine Force (MARFORs) Component Command SC objectives. MCSCG achieves

this by concentrating on these three SC focus areas: Build relationships, facilitate access and building partner capacity (BPC).

MCSCG accomplishes its mission through six principal lines of effort in order to provide integrated security cooperation solutions:

1. Security Assistance/International Programs: Coordinate and manage Security Assistance education and training programs.
2. Foreign Security Force – Capability Based Assessments: Conduct detailed and comprehensive assessments that inform the SC Planning Cycle.
3. Security Cooperation Engagement Plans: Develop long term and enduring Security Cooperation Engagement Plans with our partners and provide deployable planning support elements to the regional MARFORs.
4. Education: Provide resident and deployable instruction to Marine Corps personnel assigned to manage SC activities.
5. Training: Provide SC training to Marines tasked to conduct SC missions.
6. Unity of Effort: SC coordination across USMC and Maritime services.





**BUILDING PARTNER CAPACITY (BPC)**

- Security Force Assistance (SFA)
- Security Assistance (SA)



**BUILDING RELATIONSHIPS**

- Key Leader Engagements
- Mil to Mil Talks
- Exchange Programs

**FACILITATE ACCESS**

- Routine Visits
- Basing / Over Flight





**PILLAR 3:**  
CAPABILITY & CAPACITY TO MEET DOD  
STRATEGIC REQUIREMENTS





# SECTION 1: AMPHIBIOUS AND PRE-POSITIONING SHIPS





## NAVAL EXPEDITIONARY CAPABILITY IN THE 21ST CENTURY

The United States is a Global Maritime Nation. It remains the world's largest economy, critically dependant on the global commons for our livelihood. Over 90% of the world's commerce travels by sea. Global populations continue to shift to the littoral regions along the oceans' coastlines; 21 of the world's 28 mega-cities lie within 62 miles of a coastline. Protecting our citizens, allies and interests in this global system is necessary for both our prosperity and security.

The sea provides the primary global common through which American power is projected. Marines (an inherently naval force) and the amphibious warships which carry them, use the oceans as maneuver space in order to influence potential crises from the sea without forcing escalation or aggravating sovereignty. Amphibious forces are designed to provide a wide range of capabilities from the sea. They can loiter unseen over the horizon or provide a visible deterrent. Our presence equals access, which creates options and decision space for our Nation's leaders. With modern aviation and surface connectors, Marine forces can provide kinetic strike or responsive maneuver from hundreds of miles out to sea.

## MARITIME SUPPORT TO EXPEDITIONARY OPERATIONS

During the 1920s and 1930s, the Navy and Marine Corps began experimenting with new concepts and techniques that would change the way they conducted expeditionary operations. The Navy experimented with aircraft carrier operations using a converted coal ship and two partially completed battle cruisers. The Marine Corps experimented with amphibious tractors, close-air support, and combined arms to develop doctrine, concepts of operations, and training for amphibious operations. The inter-war years of experimentation and concept development resulted in a Navy and Marine Corps team that won the war in the Pacific during World War II.

Today, we are at a similar point in the evolution of new expeditionary capabilities, and a similar commitment to experimentation and concept development is shaping the Marine Corps and Navy for the 21st Century. The concept of sea basing is maturing and becoming a reality as new platforms and technologies that allow us to operate more effectively from a sea base are delivered. Until recently, Marines have been able to conduct sea-based operations only from amphibious shipping, because today's prepositioned materiel and equipment can be employed only once forces are assembled ashore. Additionally, our prepositioned equipment has been perceived as a "break glass in time of war" capability. It is no longer primarily reserved for major combat operations.

Meeting the demands of today's security environment means that our amphibious and prepositioning assets must be more integrated to better support steady-state operational requirements. We also must eliminate the false perception that amphibious and pre-positioning capabilities are separate and distinct. Amphibious and prepositioning capabilities are complementary and in the future will become more interoperable and mutually supportive across the range of military operations. Both capabilities must evolve to provide greater utility, particularly in irregular war-

fare and other low to mid-intensity operations, while retaining the capability to fully support major combat operations. In particular, our Maritime Prepositioning Force (MPF) must develop a full at-sea arrival and assembly capability to better support maneuver operations ashore.

## EXPEDITIONARY NAVAL FORCES IN SUPPORT OF NATIONAL STRATEGY

The tri-Service *A Cooperative Strategy for 21st Century Seapower* states that forward-deployed and globally engaged Marine Corps expeditionary forces, with the Navy and Coast Guard, "...act across the full range of military operations to secure the United States from direct attack; secure strategic access and retain global freedom of action; strengthen existing and emerging alliances and partnerships; and establish favorable security conditions." Most significantly, these "persistently present and combat-ready" maritime forces also "provide the Nation's primary forcible-entry option in an era of declining access."

The Marine Corps amphibious and prepositioning capabilities contribute to the Joint Force's expeditionary capability and fulfill the Nation's maritime strategic imperatives as follows:

- Limiting regional conflict with forward-deployed, decisive maritime power
- Deterring major-power war
- Winning our Nation's wars
- Contributing to homeland defense in depth
- Fostering and sustaining cooperative relationships with more international powers, and
- Preventing or containing local disruptions before they impact the global system

Operating in concert with the Navy and the Coast Guard, Marine Corps expeditionary forces can be employed from a sea base to complement other joint means of projecting influence and power. These forces leverage the advantages afforded by our command of the seas and ability to dominate the maritime domain to conduct operations in the littorals. The Marine

Corps core competencies are the foundation for our expeditionary forces' significant contributions to the Nation's security.

### OPERATIONAL ROLE OF MARINE CORPS EXPEDITIONARY FORCES

Our strategies and concepts address the following requirements: the ability to maintain open and secure sea lines of communication for our maritime nation; the ability to maneuver across and project power from the sea; the ability to work with partner nations and allies to conduct humanitarian relief or noncombatant evacuation operations; and the ability to conduct persistent and sustained littoral operations along any coastline in the world.

Marine Corps expeditionary forces provide a balanced and scalable set of capabilities to counter irregular threats, respond to emerging crises, and conduct major combat operations. In this era of strategic uncertainty, a forward deployed expeditionary force, consistently engaged and postured for rapid response, is critical for national security in the future as it is today. The Marine Corps expeditionary capability is enabled by the complementary employment of amphibious shipping and prepositioned equipment. Together they provide responsive and scalable options to project influence and power and provide support across the full spectrum of operations to include engagement operations and crisis response.

The deployment of the 22d and 24th Marine Expeditionary Units (MEUs) on board amphibious shipping and the prepositioning ship USNS *1st Lt. Jack Lummus* to support humanitarian and disaster-relief operations in Haiti in 2010 is an example of the Marine Corps capability to rapidly respond to crisis. These forces provide a similar capability to respond at the high end of the military operations spectrum to create littoral maneuver space for the Joint Force. The expeditionary character, versatility, and agility of Marine Corps expeditionary forces provide the Nation with the asymmetric advantage of seamlessly adjusting

the size of its military footprint to match the changing situation ashore.

### TODAY'S AMPHIBIOUS CAPABILITY

Among the many capabilities provided by integration of combat-ready Marine Air Ground Task Forces (MAGTFs) with multi-mission amphibious ships, three are of critical importance:

- Forward presence to support engagement and theater security cooperation
- A ready force to immediately respond to emergent crises
- A credible and sustainable forcible-entry capability

Forward-deployed amphibious forces are unique in that they are postured to immediately respond to crises while conducting persistent forward engagement to prevent and deter threats, particularly in the areas of instability in the littorals. Often the mere presence of an amphibious force capable of delivering a powerful amphibious blow at a point and time of its own choosing is enough to stabilize an escalating crisis. The inherent versatility and flexibility of amphibious forces — exemplified by their ability to conduct missions across the range of military operations — achieves advantages disproportionate to the resources employed.

An amphibious capability creates four strategic benefits for a nation that depends on its ability to exploit its command of the seas to project influence and power, as follows:

- **Increased Freedom of Action:** Amphibious forces can use the maritime domain as a base from which to conduct operations. They can loiter indefinitely in international waters and maneuver ashore at the time and place of their choosing.
- **Deterrence:** While a standoff strike is sometimes an adequate response, other situations require the rapid insertion of sustainable combat forces — “boots on the ground” — to underscore the Nation's commitment to an ally or friend.
- **Assured Access:** Amphibious forces contribute

unique and essential capabilities toward the Nation's ability to take advantage of the freedom of the high seas to enter a region without regard to access constraints and impediments and to sustain sea-based operations almost indefinitely without need for in-theater host-government support.

- **Uncertainty for Adversaries:** A credible forcible-entry capability compels potential adversaries to invest in a broad range of systems and spread their defenses over larger areas of concern.

The lengthy experience of the Marine Corps in conducting forward engagement and security cooperation operations in the littorals has dispelled the misperception that forcible entry is the only yardstick by which the requirement for amphibious capability and capacity is measured. More relevant metrics in today's security environment, as underscored in the *2010 Quadrennial Defense Review*, are the capability to conduct persistent forward engagement activities and provide a crisis-response force while retaining the capability to respond to major contingencies.

The importance of amphibious forces is highlighted by the increased employment of Marine Corps expeditionary forces since the end of the Cold War. From 1946 through 1989, amphibious forces were employed on average 2.5 times per year; since 1990, the rate has increased to about 5.5 times per year. The demand for amphibious forces to support steady-state operations is projected to increase even more in the coming years as combatant commanders place greater emphasis on conducting sea-based persistent forward-engagement activities throughout their areas of responsibility. Viewed another way, combatant commanders' global demand for amphibious ready groups and MEUs has increased 86 percent and 53 percent for independent amphibious ships during the FY 2007 to FY 2011 period.

The ability to meet the demand for amphibious ships with the programmed amphibious fleet is a critical concern. When forward-presence requirements are factored in with the 2.0 Marine Expeditionary Brigade (MEB) assault-echelon lift needs, the requirement calls for 38 amphibious ships, 11 of which must be

aviation-capable large-deck warships. Because of fiscal constraints, however, the FY 2012 programmed force level calls for 32 ships. The increased demand for amphibious forces thus has placed a strain on amphibious shipping as the employment of amphibious forces has increased while the inventory of amphibious ships has declined. Newly delivered amphibious ships, such as the *San Antonio* (LPD 17)-class landing platform dock ships, are more capable than the ships they replace. However, a ship can be in only one place at a time. Although the fleet retains a responsive surge capability, the constrained number of in-service ships precludes fully supporting the growing demand for rotational MEU and Global Fleet Station deployments and other requirements. The Marine Corps amphibious ship and associated ship-to-shore connector requirements are highlighted in the following pages.

## AMPHIBIOUS WARSHIPS

Amphibious warfare ships are the centerpieces of the Navy-Marine Corps presence, forcible-entry, and sea-basing capabilities and continue to play essential roles in global operations. These ships are equipped with aviation- and surface-assault capabilities that, when coupled with their inherent survivability and self-defense systems, support a broad range of mission requirements. They provide the most formidable expeditionary forcible-entry capability in the world, the development and maintenance of which is the responsibility of the Marine Corps under U.S. Code Title 10.

The Marine Corps operational requirement is for two Marine Expeditionary Brigade Assault Echelons (MEB AE) of forcible-entry capability reinforced with two additional MEBs from the Maritime Prepositioning Force. The two-MEB AE forcible-entry capability requires 34 amphibious warfare ships (17 ships per MEB). When forward-presence requirements are considered with the 2.0 MEB lift requirement, the AE requirements total 38 ships. Of these 38 ships, 11 must be aviation-capable large-deck ships — Landing



Helicopter Assault (LHA), Landing Helicopter Dock (LHD), or Landing Helicopter Assault (Replacement) LHA(R) — to accommodate the MEB's Aviation Combat Element.

Nine large-deck ships (eight *Wasp*-class LHDs and one *Tarawa*-class LHA) are in service in 2012. The eighth *Wasp*-class multi-purpose amphibious assault ship, the USS *Makin Island* (LHD 8), was delivered in 2009. LHD 8 is similar to LHD 1 through LHD 7, but is powered by gas turbine engines and has all-electric auxiliaries.

#### AMPHIBIOUS ASSAULT SHIP REPLACEMENT (LHA(R))



The amphibious fleet is organized for persistent forward presence as the foundation for other critical roles, missions, and tasks. It includes nine amphibious ready groups (ARGs), each consisting of three amphibious ships. The centerpiece of the ARG is a *Wasp* (LHD 1)-class or *Tarawa* (LHA 1)-class amphibious assault ship. The sole *Tarawa*-class amphibious assault ship will be decommissioned in FY 2014. The first of two transitional LHA Replacement (LHA(R)) ships, the USS *America* (LHA 6), began construction in 2008. LHA 6 design modifications enhance aviation support for MV-22B Osprey and F-35B Joint Strike Fighter operations. Removal of the well deck provides for an extended hangar deck with two wider high-bay areas, each fitted with an overhead crane for aircraft maintenance. Other enhancements include a reconfigurable

command and control complex, a hospital facility, and extensive support activities. Efforts are underway to incorporate a well deck into the FY 2016 LHA(R) platform and to incorporate changes in the basic ship design to ensure optimized aviation and surface operations and service life.

#### SAN ANTONIO-CLASS (LPD 17) AMPHIBIOUS TRANSPORT DOCK SHIP



The LPD 17 *San Antonio*-class amphibious warfare ship represents the Department of the Navy's commitment to a modern expeditionary fleet. The first five ships of the class — the USS *San Antonio* (LPD 17), USS *New Orleans* (LPD 18), USS *Mesa Verde* (LPD 19), USS *Green Bay* (LPD 20), and USS *New York* (LPD 21) — have been commissioned. The *San Antonio*-class LPDs are replacing the remaining ships of the *Austin* (LPD 4) class.

The LPD 17's unique design expands force coverage and decreases the reaction times of forward-deployed MEUs. In forcible-entry operations, the LPD17 helps maintain a robust surface assault and rapid off-load capability for the MAGTF well into the future. The *San Antonio* class warships incorporate advanced characteristics for amphibious ships. Each ship has 699 enhanced berths for embarked Marines, plus a surge capacity of another 101 berths. Each also has a vehicle-stowage capacity of 24,600 square feet, cargo-stowage capacity of more than 33,000 cubic feet, and a well deck sized for two landing craft air cushions (LCAC) or one

landing craft utility (LCU). Flight decks can support operations by two CH-53E/K Super Stallions, two MV-22B Osprey tilt-rotor aircraft, four CH-46E Sea Knight helicopters, or a mix of H-1 attack/utility helicopters. The ships in this class also are outfitted with two Rolling Airframe Missile launchers for self-defense and incorporate design features that significantly reduce their radar cross-sections when compared to previous amphibious ships.

**Developer/Manufacturer:**

Huntington Ingalls Industries (formerly Northrop Grumman Ship Systems), Pascagoula, Mississippi

## LANDING CRAFT AIR CUSHION (LCAC) / SHIP-TO-SHORE CONNECTOR (SSC)



The LCAC is a high-speed, fully amphibious craft with a design payload of 60 tons at speeds in excess of 40 knots and a nominal range of 200 nautical miles. The LCAC's ability to ride on a cushion of air allows it to operate directly from the well decks of amphibious warships and to access more than 70 percent of the world's beaches, compared to 17 percent for conventional landing craft. A service life extension program (SLEP) began in late 2000 for the 72 active LCACs, which provides major refurbishment that will extend craft life to 30 years. The goal is to carry out five LCAC SLEPs per year. During SLEP, LCACs receive a system upgrade that includes

new command, control, communication, and navigation equipment; buoyancy box and rotating machinery refurbishment; enhanced engines; and upgrades of the current skirt system with an improved deep skirt, thereby increasing the performance envelope.

The Ship-to-Shore Connector (SSC) program is developing a replacement for the in-service LCACs and the LCAC service-life extension program (SLEP) as these craft reach the ends of their service lives. In 2007 the Navy Resources, Requirements Review board selected the 74 Short-Ton Air-Cushion Vehicle concept in an approved Initial Capabilities Development Document as the LCAC replacement platform.

The Joint Requirements Oversight Council approved the Capability Development Document in 2010. The contract for the detail, design, and construction of a SSC test and training craft was awarded to Textron, Inc. in 2012.

## EVOLUTION OF MARITIME PREPOSITIONING



The Marine Corps prepositioning programs consist of the Maritime Prepositioning Force (MPF) Program and the Marine Corps Prepositioning Program – Norway (MCPN). The MPF Program provides equipment and supplies to enable the rapid deployment and employment of two Marine Expeditionary Brigades (MEBs) from afloat prepositioned shipping. MCPN provides equipment and supplies for a cri-

sis response Marine Air Ground Task Force (MAGTF) and three theater security engagement MAGTFs from a shore-based prepositioning site. The MPF program will continue to evolve to meet the challenges of a constrained fiscal environment as well as a strategic environment with greater anti-access challenges.

Maritime Prepositioning Ship Squadron-One (MPSRON-1) was eliminated and its ships were either transferred to the U.S. Transportation Command's Strategic Sealift Fleet or reassigned to MPSRON-2 or -3. The Marine Corps and Navy collaborated extensively to enhance the capabilities of the two remaining MPSRONS, to include the addition of a legacy MPF ship to each MPSRON. This enhancement attained a higher lift capacity of the MEB requirement per MPSRON, retained critical sea-basing enabling capabilities within each MPSRON, and maintained the Maritime Prepositioning Force's ability to support geographic combatant commander requirements. In addition, Marine Corps afloat and ashore prepositioning programs are programmed for other significant changes through 2025 and beyond. Changes will occur in the afloat program, where the capability to conduct sustained sea-based operations with limited host-nation infrastructure in the Joint Operating Area (JOA) will provide a greatly expanded set of options for the combatant commanders. A detailed integration plan has been developed to ensure the new capabilities are seamlessly incorporated into the existing program.

The first stages of this plan have already been realized. Each MPSRON has increased organic ship-to-shore movement capability with the fielding of the Improved Navy Lighterage System (INLS). The INLS provides operability in higher sea states and greater throughput capacity than the legacy lighterage it replaces. The MPF also has been recapitalized with Military Sealift Command (MSC) either purchasing or terminating the program's leased ships.

Another major enhancement is the integration of four Large Medium-Speed Roll-On/Roll-Off (LMSR) ships which provide more stowage space to accommo-

date the larger and more numerous equipment of the MEB. Three LMSRs are already in service with the program; the fourth will be integrated in February 2013.

While the prepositioning program provides significant capability to the combatant commanders, it is limited in some areas, especially the ability to conduct sea-based operations. The closure of forces requires a secure airfield and a secure port or beach landing site in the JOA — a significant constraint to some operations. In-service MPF platforms can embark limited personnel pierside, at anchor, or while in transit. However, the platforms lack the billeting and support services to facilitate a sea-based force. Additionally, equipment and supplies are administratively stowed to maximize all available space. This administrative “dense packing” of the ships precludes the conduct of assembly operations aboard MPF ships. In-service MPF platforms can support the limited employment of forces from a sea base, but this requires significant planning prior to back-loading the ships during the preceding MPF maintenance cycle. Also, since there are no maintenance facilities aboard in-service MPF vessels, all reconstitution must be done ashore before back loading any of the equipment or supplies.

Between 2013 and 2015, additional ships will be integrated into the MPSRONS. Each new platform will incrementally transform the existing MPSRONS and provide an immediate operational benefit to combatant commanders. Dry cargo/ammunition ships enable selective access to and the offload of supplies, allowing the building of tailored sustainment packages for forces operating ashore. Mobile Landing Platforms will provide the capability to conduct at-sea, sea state-3 selective offload and vehicle/cargo transfer from an LMSR to ship-to-shore connector craft. During this transition period, training and exercises will focus on the development of new tactics, techniques, and procedures as well as doctrinal and organizational changes to fully realize the enhanced ability and operational utility of afloat prepositioning.

## JOINT HIGH SPEED VESSEL (JHSV)



The JHSV will provide the critical intra-theater, surface connector capability that will enable the joint force commander to project forces and sustainment at high speeds over operational distances. The JHSV will be capable of self-deploying to the theater of operations and, once in theater, provide the high-speed

means to move forces and supplies within that theater. Specifically, the JHSV will provide the capability to deliver equipment, personnel, and supplies over the intra-theater ranges to shallow, austere, and degraded ports. It will provide support to seabasing and will bridge the gap between low-speed sealift and high-speed airlift.

The JHSV lead ship — USNS *Spearhead* (JHSV 1) — completed acceptance trials in 2012 with three additional ships in various stages of construction at Austal USA in Mobile, AL. The current contract is for 10 ships. Two high-speed commercial ferries, renamed the USNS *Guam* and USNS *Puerto Rico* have also been purchased. In the interim, high-speed vessels will continue to be leased in the Pacific Command area of responsibility to satisfy compelling requirements.







# PILLAR 4: INFRASTRUCTURE SUSTAINMENT





# SECTION 1: PROVIDING CAPABLE BASES AND STATIONS





## INTRODUCTION

Logistics is a fundamental element of Marine Air Ground Task Force (MAGTF) expeditionary operations. The MAGTF expeditionary logistics capability supports a balanced, multi-capable force that is integral to the strategic direction described in Marine Corps Vision and Strategy 2025. Marine expeditionary forces are self-contained and self-sustained forces that have everything necessary to accomplish the mission — from individual equipment to expeditionary airfields and medical treatment facilities. These forces are structured to meet a wide range of contingency operations and possess the logistics capabilities needed to initiate an operation, sustain forces, and reconstitute for follow-on missions.

MAGTF Expeditionary Logistics includes the information systems, equipment, and processes to train, deploy, employ, and sustain Marine forces across the range of military operations. Enablers include:

- Electronic Maintenance Support System
- Family of Combat Field Feeding Systems
- Family of Field Medical Equipment
- Family of Power and Environmental Control Equipment

These are key for continuous MAGTF operations on a distributed battlefield. The Marine Corps vision of the future requires fundamental changes in the way we provide logistics support to our MAGTFs.

## INSTALLATIONS AND MILITARY CONSTRUCTION

Marine Corps bases and stations represent an irreplaceable national asset today and as far into the future as we can project. They are fundamental to combat readiness, particularly the pre-deployment training, launching, sustaining, and reconstituting of Marine operating forces. In 2025, Marine Corps installations will provide an even higher quality training environment directly supporting the Total Force in Readiness through acquisition and maintenance of essential training facilities. Additionally, those bases and stations are and will continue to be integral to the quality of life of Marines, Sailors, and their families through provision of a range of support facilities and related infrastructure.

The operation and maintenance of these installations, as well as their future development and use, require planning, wise investment, and sound execution. Numerous Corps-wide efforts are underway to ensure Marine Corps installations are ready, responsive, and capable of meeting current and future support requirements.

The Marine Corps has more than \$58 billion and 133 million square feet worth of facilities that are used to train, house, and provide excellent quality of life for Marines and their families. Examples of these facilities are barracks, runways, sewage treatment plants, roads, and electrical lines. These facilities are used to perform mission-essential tasks and must be appropriately maintained. Adequately sustaining facilities is the highest facilities management priority.

The Marine Corps has a multi-faceted Military Construction program that is addressing: baseline infrastructure improvements, operational and quality of life projects at existing installations, and the Defense Posture Review Initiative to move Marines to Guam. The FY 2013 proposal of \$741 million is critical to maintaining and improving installations and providing adequate facilities both in the continental United States and overseas.

## INFRASTRUCTURE SUSTAINMENT

Facilities sustainment supports the Marine Corps mission by ensuring facilities are maintained and repaired so that they can effectively be used for their designated purposes. As resources overall and Military Construction funds in particular, become more constrained, the Marine Corps will continue to rely on the sound stewardship of existing facilities and infrastructure to support mission requirements. In FY 2013, the Marine Corps has programmed facilities sustainment funding at 90 percent of the Department of Defense (DoD) Facilities Sustainment Model, resulting in a facilities sustainment budget of \$653 million. Even this relatively strong commitment could result in some facility degradation according to the DoD model. Since FY 2004, the Marine Corps has been able to execute more than 90 percent of the Office of the Secretary of Defense Sustainment Model each year, and it is possible that such opportunities to exceed our initial programming objectives for facilities sustainment will again arise in FY 2013.

## INSTALLATIONS ENERGY



The Marine Corps recognizes the operational imperative to address an energy strategy at all levels of leadership and in all theaters of operation, from our “Bases to the Battlefields.” Critical to this is a shared

“ethos” within our force that efficient use of vital resources increases combat effectiveness. We must educate and inform everyone who lives, trains, and works on our installations — energy users — about their daily impact on the energy footprint and then provide them with tools to manage and improve their energy and water use. Awareness starts with an understanding of the value of energy, at home and deployed, and ends with accountability. In the end, we increase installation energy security while reducing the cost of purchased utilities.

The USMC Expeditionary Energy Strategy provides additional guidance and specific actions to implement the strategy. There are five key enabling concepts to implementation: awareness and accountability; measuring and improving performance; energy efficiency as a component of planning; proactive employment of new technologies; and energy security and environmental stewardship. These actions will enable the Marine Corps to implement the Deputies Management Advisory Group strategies to: invest in energy efficiency; develop an energy ethos; and reduce conventional energy dependence.

### FACILITIES ENERGY INVESTMENTS

Our investments support enabling concepts by putting metering and meter data management systems in place to make energy usage information available to Marine units on our bases as well as to our facilities managers. We are also making significant investments in basic facilities infrastructure to improve the efficiency of our existing buildings and the energy consuming systems in them. New construction is efficient and cost effective to meet requirements for energy efficiency and sustainability. Installation Commanders will make operational improvements as appropriate using improved information on energy use. These efforts will provide a comprehensive approach for achieving energy efficiency standards and goals.

We are partnering with private companies to provide secure, cost effective, renewable power taking ad-

vantage of incentives available to our private partners, which allows us to meet renewable energy mandates. Where practical, these efforts will improve energy security for our installations and the country by reducing reliance on foreign energy sources.

### GARRISON MOBILE EQUIPMENT (GME)

GME provides commercially available equipment supporting installation transportation requirements such as transportation, firefighting, rescue, construction, and material handling. The fleet includes over 14,000 vehicles.

The Marine Corps has an aggressive program for petroleum fuel reduction and conservation in the GME fleet. The Service repeatedly exceeds the requirements of the Energy Policy Act of 1992 Alternative Fuel Vehicle acquisition requirements and has been a leader in the Department of Defense and other Federal agencies in the adoption of efficient vehicle technologies and the use of alternative fuels, including electricity, E85, compressed natural gas, hybrids, biodiesel, and hydrogen.

### RANGE MODERNIZATION/ TRANSFORMATION (RM/T)

#### DESCRIPTION

The RM/T program modernizes major Marine Corps live training ranges with a dynamic training system capable of real-time and post-mission battle tracking, data collection, and the delivery of value-added after-action reviews. Interface with installation command and control training centers — including the Battle Staff Training Facility, Combined Arms Staff Trainer, and Battle Staff Simulation Center — will facilitate the production of multiple scenario events that deliver relevant and realistic training. Integrating live and simulated training technologies, the fielded capabilities actively enhance live-fire, force-on-target, and force-on-force training through extensive after-action

reviews with ground-truth feedback, realistic representation of opposing forces, and enhanced range and exercise control capabilities.

### OPERATIONAL IMPACT

RM/T aligns Marine Corps live training with the tenets of Training Transformation–Joint National Training Capability and Joint Assessment and Evaluation Capability. Instrumentation allows service and joint virtual and constructive forces to interact with Marine Corps live training forces from distributed locations. Eventually expanded to incorporate coalition forces, Marine Air Ground Task Force (MAGTF) live training in open and urban terrain is enhanced by providing capabilities to conduct realistic training. This will exercise all battlefield operating systems, and allow continuous assessment of performance, interoperability and identification of emerging requirements.

### PROGRAM STATUS

Sponsored by the Range and Training Area Management Division, Training and Education Command, and managed by Program Manager Training Systems, Marine Corps Systems Command, RM/T is the final integrated design of live training programs of record that upgrade Marine Corps training capabilities in an incremental manner. Development and production efforts are under way for urban training environments, ground position location systems, instrumented tactical engagement simulation systems, opposing force threat systems (including targets), and data collection systems to instrument the live training environment at multiple Marine Corps bases and stations.

A parallel effort is enhancing the RM/T Data Collection System (Marine Corps-Instrumented Training System) to provide interface of Improvised Explosive Device and Joint Counter Radio controlled Improvised Explosive Device Electronic Warfare System surrogate devices with live training audiences and to extend the R/MT Data Collection System functions from exercise design through playback and after-action review.

## HOUSING

### BACHELOR ENLISTED QUARTERS (BEQ)

Bachelor housing is one of the Commandant's top Military Construction priorities. The Commandant's BEQ Initiative, initiated in 2006, provided more than \$2.7 billion in construction funds to correct barracks space shortfalls, implement renovations, and provide collateral equipment. These initiatives will eliminate existing BEQ space deficiencies and inadequate barracks and achieve the Marine Corps desired "2+0" assignment standard by FY 2014.

The new BEQs will be highly modern living facilities for Marines and Sailors and will include rooms with improved aesthetics and bathroom configurations, enhanced recreation and laundry areas and will be designed to optimize climate control and energy efficiency.

### FAMILY HOUSING

By September 2007, the Marine Corps had privatized all family housing units where it was economically advantageous and authorized (for example, military housing legislative authorities prohibit housing privatization at overseas locations). Privatization of housing was done to provide better quality homes, community support facilities, and maintenance services that were not possible through the Military Construction, and Operations and Maintenance processes of the past. In early 2011, there are more than 22,000 units of housing privatized and less than 1,000 Marine Corps-owned and -managed units remaining.

The Marine Corps has leveraged private financing to government investment at a ratio of approximately 4 to 1. This has enabled the Marine Corps to quickly and significantly upgrade family housing infrastructure and improve housing management. As a defining metric, the family housing occupant satisfaction levels continue to be much higher than when the housing units were owned by the Service. Housing referral, the process of assisting military families to find housing, is still retained by the government.



Constructing deficit housing will continue through 2014, principally at Camp Pendleton, CA; Camp Lejeune, NC; and Marine Corps Air Ground Combat Center, Twentynine Palms, CA. New units constructed at these facilities will be modern and energy efficient, and will continue to improve the quality of life of Marines, Sailors, and their families.

### ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES STEWARDSHIP

The Marine Corps serves as custodian and steward of approximately 2.3 million acres of some of the most environmentally sensitive and diverse areas of the country and the world, including large portions of the Mojave and Sonoran Deserts, some of the last remaining sub-tropical rain forest in Asia, and numerous fresh and saltwater waters and wetlands. These lands provide areas where our Marines live and train as well as habitat for an abundance of wildlife species, including 59 federally listed threatened and endangered plant and animal species. These same lands contain a diversity of cultural resources, including archaeological sites; historic buildings, structures, and objects; cultural landscapes and resources of traditional, religious, or cultural significance to Native American tribes or Native Hawaiian organizations. These resources reflect thousands of years of human activity, including

important developments in our Nation's history and the role of the military in that history, and embody our shared historical experiences. Many of our installations are also located in areas with regional air and water quality issues that require the Marine Corps to meet stringent requirements to ensure environmental protection and improvement and mission success.

Effective environmental management of these resources ensures mission readiness by allowing the Marine Corps to sustain and enhance these lands, while protecting the health of our citizens, Marines, and the valuable resources entrusted to us by our Nation. Land is a finite, valuable commodity. Unless properly managed, Marine Corps lands can become damaged to the point where realistic training can no longer take place. Marine Corps use of land must be sustainable so the Marine Corps may use its lands frequently and repeatedly. In addition, the American people have placed intrinsic values on stewardship of natural and cultural resources. These values have been translated into laws requiring the Marine Corps to protect and preserve human health and the environment. In most instances, Federal and state laws and regulations apply to the Marine Corps in the same way they do to our civilian counterparts. Failure to comply with these laws can lead to fines, penalties, and judicial, legislative, and executive decisions denying the Marine Corps access to land for training.



# PILLAR 5: EQUIPMENT MODERNIZATION



# SECTION 1: EQUIPPING THE MARINE





## FOLLOW-ON TO SHOULDER LAUNCHED MULTI-PURPOSE ASSAULT WEAPON (FOTS)



### DESCRIPTION

The Shoulder Launched Multi-Purpose Assault Weapon (SMAW) II is the materiel solution to the FOTS capability requirement defined in a Capability Development Document. The SMAW II system will consist of a new launcher to replace the existing SMAW Mk153 Mod 0 launcher, and the multi-purpose, fire-from-enclosure (FFE), encased round. The SMAW II launcher will be functionally and physically compatible with existing SMAW legacy rounds.

### OPERATIONAL IMPACT

The SMAW II provides the Marine Corps Assault Team the ability to engage targets from inside an enclosure or in a confined space (e.g. alleyway), which significantly improves the team's tactical flexibility and survivability. The system provides a lighter, more maintainable, and more reliable launcher, which incorporates state-of-the-art technology not resident in legacy system.

### PROGRAM STATUS

The Launcher will reach Initial Operational Capability (IOC) in FY 2013 and Full Operational Capabil-

ity (FOC) in FY 2016. The Rocket (FFE Round) will reach IOC in FY2014 and FOC in FY 2017.

Procurement Profile:	FY 13	FY 14
Quantity:		
Launchers	0	0
FFE Rounds	0	0

Developer/Manufacturer:

FFE Round: Nammo Talley, Incorporated, Mesa, AZ

Launcher: Raytheon Missiles Systems, Tucson, AZ

## MARINE ENHANCEMENT PROGRAM (MEP)



### DESCRIPTION

The Marine Corps stood up the MEP in 1989 in response to congressional guidance for the Corps to establish programs dedicated to improving the "lethality, comfort and survivability" of the individual Marine. The primary focus of the program is on low-cost, low-visibility materiel solutions that can be rapidly fielded and that typically do not compete well against larger, high-profile items in the Department of the Navy's budget.

The MEP thus ensures improvements for the individual Infantryman are identified and quickly transitioned into practical solutions. This goal is achieved through an accelerated acquisition process that takes advantage of commercially available technologies to provide lighter, more improved "infantry items" to the

Marines as quickly as possible. Depending upon when the item is needed, its complexity, risk and cost, it can take from 90 days to two years to test, modify as appropriate, procure and field the item to the Marine.

### OPERATIONAL IMPACT

Items procured and fielded under the MEP seek to reduce the load, increase the survivability, enhance the safety and improve the lethality of the individual Marine Infantryman across the spectrum of operational environments. MEP systems are intended primarily for the Marine Infantryman within the Ground Combat Element (GCE). When applicable, MEP items have also transitioned to support other Military Occupational Specialties within the GCE (e.g., Combat Engineers and Artilleryman) and across the Marine Air Ground Task Force (e.g., Supply, Maintenance, Administration and Ordnance). In recent years, the MEP has funded several critical programs, including: Field Tarp, Flame-Resistant Organizational Gear, Modular Tactical Vest, Multi-Purpose Bayonet, Rifle Combat Optic, Individual Water Purification Block I (Miox Pen), Tactical Handbook, Unit Leaders, Small, Grip Pod for the M16 and M203, Handheld Flashlight, Three Season Sleep System, Pocket Laser Range Finder, Marine Corps Pack, Hearing Armour (hearing protection), Solar Portable Power System, the Vehicle Mounted Battery Charger, Patrol Planning Tool and the Improved Helmet Suspension/Retention System.

### PROGRAM STATUS

The MEP Working Group includes core representatives from Plans, Policies and Operations, Marine Corps Combat Development and Integration, and Marine Corps Systems Command. Nominations for the MEP initiatives come from Marines via the website, email and the Advocate, or through review of the U.S. Army's Soldiers Enhancement Program for capabilities matching a Marine Corps need. Nominated capabilities must focus on Commercial-Off-The-Shelf or Non-Develop-

mental Items that can be executed quickly. The potential MEP initiatives for 2013 include: Small Arms Collimator, Modular/Scalable Protection System and Enhanced Hearing Protection.

### FAMILY OF IMPROVED LOAD BEARING EQUIPMENT (FILBE)



#### DESCRIPTION

The FILBE comprises load-carrying systems and components. It is designed to provide a stable platform for carrying equipment and supplies needed across the spectrum of individual and unit operations. The FILBE includes the load carriage system for the USMC (USMC Pack system), the holster for the service pistols (USMC Holster), the Corpsman Assault System (CAS), Individual Water Purification System (IWPS), sub-belt, body armor pouch suite, and the USMC Chest Rig.

The USMC Pack system incorporates an external composite frame and is designed to better integrate with body armor systems. The USMC Pack system will be fielded as a system consisting of a main pack, an assault pack, a hydration carrier, and five sustainment pouches of differing sizes.

The USMC Holster is an integrated system using a modular composite holster that is replacing the fielded M-12 holster. The USMC Holster will provide three mounting platforms: the belt platform for garrison duty; the drop-leg platform to support combat dismounted use; and the Pocket Attachment Ladders System (PALS) platform to support a chest-mounted position for tactical operations.

The CAS is a modular four-bag system that will provide rapid access to medical equipment and consumables. It supports first-responder capabilities tailored to the duration and casualty expectations of a full range of combat and non-combat operations. The CAS will integrate with the different USMC body armor systems and will be compatible with the USMC Pack system.

The IWPS is a critical element of the Marine's individual load. It is intended to provide the warfighter with the capability to produce microbiologically safe water from any freshwater source while operating in austere environments. It will reduce waterborne pathogens (viruses, bacteria, and protozoan cysts), sediment, and bad taste and odor. IWPS includes an oxidant and ultra-filter device (pump or in-line filter).

The Sub-Belt provides for attachment of the USMC Holster and pouches via PALS to optimize load distribution and an alternative placement of pouches to the chest rig and body armor systems.

The ILBE pouches are a series of robust, specialized pouches capable of carrying the basic ammunition load required to support and sustain the individual Marine during combat operations. The pouch suite will be a collection of individual pouches geared toward the Marine's load carriage requirements.

The USMC Chest Rig provides the individual Marine the means to carry the fighting load in a modular system. It allows for rapid reconfiguration of the fighting load between fielded Personal Protection Equipment (PPE) or employed in a stand-alone configuration.

### OPERATIONAL IMPACT

The FILBE program provides Marines improved scalability, modularity, and integration with other fielded body armor and individual equipment. It allows Marines to efficiently carry mission loads across the full-spectrum of combat and non-combat operations. The USMC Holster allows Marines better weapons carriage and the ability to rapidly engage

targets from the holster implementing current combat marksmanship techniques. The CAS will enhance first responder capabilities by providing the Corpsman a smaller, lighter, and efficient pack system responsive to the different mission requirements.

### PROGRAM STATUS

The USMC Pack system reached Initial Operational Capability (IOC) in FY 2012 and will reach Full Operational Capability (FOC) in FY 2013. The USMC Holster IOC and FOC were reached in FY 2012.

Procurement Profile:	FY 13	FY 14
Quantity:		
USMC Pack	36,071	0
CAS	10,000	0
IWPS	130,100	14,456
SUB-BELT	269,662	0
POUCH SUITE	TBD	TBD

#### Developer/Manufacturer:

USMC Pack/Sub-belt: Eagle Industries, Fenton, MO

Propper International, Mayaguez, Puerto Rico

CAS: TBD

IWPS: TBD

Pouch Suite: TBD

### FAMILY OF INDIVIDUAL WARFIGHTER EQUIPMENT (IWE) DESCRIPTION

The IWE consists of multiple programs that provide increased warfighter capability, protection, and sustainment in combat environments. There are more than 100 IWE projects within the Family of IWE. Many of these programs were the result of Universal Needs Statement (UNS) requirements or requests from Marine Corps operating forces. The Family of IWE programs include:

Multipurpose Compact Attachable Light (MCAL);



Night Vision Goggle Compatible Light; Enhanced Bed Net System; Handheld Flashlight; High Intensity Miniature Illumination System; Multi-Purpose Bayonet; Mechanical Breachers Kit; Martial Arts Kit; Chaplain's Kit; Field Tarp; ILBE Waterproof Bags; Marine Corps Wire Cutter; Marine Corps Strap Cutter; Entrenching Tools; Collapsible Waterbag; and Engineer Tools

### OPERATIONAL IMPACT

The IWE provides Marines individually issued items that enhance their combat capabilities, have reduced weight, increase energy efficiency and provide a unique capability to the operating forces.

### PROGRAM STATUS

IWE programs are in various phases of the acquisitions process ranging from the Engineering and Manufacturing Development phase to Operations and Support phase.

Procurement Profile:	FY 13	FY 14
Quantity:		
MCAL	9,204	14,336

Developer/Manufacturer:  
Streamlight Eagleville, PA





# SECTION 2: GROUND COMBAT TACTICAL VEHICLES



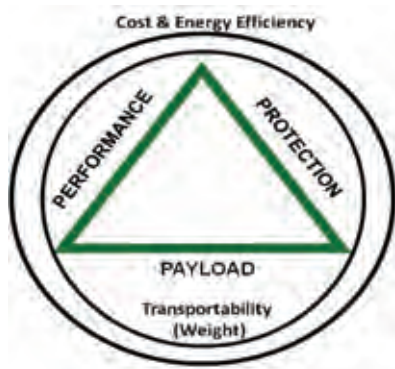
## MOBILITY FOR THE 21ST CENTURY

As the middleweight force, we are light enough to the point of friction quickly, heavy enough to carry the day upon arrival, and capable of operating independent of local infrastructure. Initiated in 2008, the Marine Corps founded the Ground Combat and Tactical Vehicle Strategy. It provides a basis for planning, programming, and budgeting the ground maneuver and mobility capabilities and needs for the Marine Corps as America's Expeditionary Force in Readiness – a balanced, air-ground logistics team. We are forward-deployed and forward-engaged: shaping, training, deterring, and responding to all manner of crises and contingencies. This Strategy guides planning for the right mix of vehicles capable of supporting the spectrum of operations.

## GROUND COMBAT AND TACTICAL VEHICLE STRATEGY (GCTVS)

### DESCRIPTION

The objective of the Ground Combat Vehicle Strategy is to field a ground combat vehicle portfolio, structured to support three balanced Marine Expeditionary Forces (MEFs). One MEF will be capable of a two-Marine Expeditionary Brigade (MEB) sea-based, assured-access operation with one MEB in Assault Follow On Reserve; all MEFs will be capable of conducting irregular warfare and sustained operations ashore across the range of military operations. Vehicles within the GCTV portfolio will have the balance of performance, protection, payload, transportability, and fuel efficiency to support rapid concentration and dispersion of Marine Air-Ground Task Force (MAGTF) combat power, support strategic deployment concepts, and meet and sustain worldwide Marine Corps commitments.



Four pre-planned Marine Requirements Oversight Council decision points control execution of the strategy to meet the GCTV objective. Future decision points will guide planning to inform Program Objective Memoranda (POMs) 2013, 2014, and 2016 decisions regarding ground mobility investments. The information supporting each decision point will provide cost, effectiveness, and risk information on alternative courses of action relevant to the issues challenging successful fielding of the future fleet.

### OPERATIONAL IMPACT

The Marine Corps requires the ability to maneuver and sustain combat power across the range of military operations and in various environments, from the Arctic to the desert. The combat and tactical vehicles required to achieve this must provide appropriate force-level maneuver capabilities, including compatibility with rotary-wing and surface assets, sustainability, and complementary to enhance tactical flexibility and minimize risk.

The GCTV strategy manages the future inventory in heavy, medium, and light vehicle categories that are further divided into combat and tactical vehicle types. Combat vehicles facilitate maneuver of combat teams while tactical vehicles facilitate the distribution of sustainment material and services by logistics teams. The three combat vehicle and three tactical vehicle categories are correlated to the range of military operations and operating environments to meet performance, protection, payload, and transportability characteristics. The entire portfolio of vehicles will have these characteristics to achieve the following objectives:

- Support rapid transition between concentration and dispersion of MAGTF combat power by fielding vehicles with modular and adaptable armor in multiple capability categories
- Support strategic deployment concepts by closely managing transport weights and prepositioning objectives
- Provide capacity to meet and sustain simultaneous Marine Corps commitments worldwide by maintaining operational availability and optimizing mix and distribution across the enterprise

### Combat Vehicles

The Expeditionary Armored Forces Initial Capability Document (EAF ICD) is a USMC capability-based assessment (CBA) focused on the mounted components of the Ground Combat Element that informed the development of the combat vehicle categories to support the range of military operations. The EAF ICD and the



GCTV Strategy define a triad of heavy, medium, and light combat vehicles to create a balanced force capable of achieving desired ends in the irregular spectrum of conflict while retaining core competencies against traditional threats.

### Tactical Vehicles

The Ground Combat Forces Light Tactical Mobility Initial Capability Document (GCFLTM ICD) is one of several service and joint CBAs and requirements documents that informed development of tactical vehicle categories to support military operations. To minimize the risk associated with unprotected legacy tactical vehicles operating in asymmetric environments, the GCFLTM ICD and the GCTV Strategy define a future fleet of tactical vehicles designed with adaptable armor and improved protection accomplished through the procurement of current armoring solutions.

### PROGRAM STATUS

The GCTV Strategy is currently in its third phase of implementation. Decision Point 1 already has informed POM 2010 investments, and Decision Point 2 did the same for POM 2012 investments. A key output of Decision Point 2 analysis is a planned 10,000 vehicle approved acquisition objective (AAO) reduction by the fourth quarter of calendar year 2013. Fiscal implementation of that reduction will inform POM 2013. The POM 2012 endgame will set the course for key Requests For Information to be addressed during Decision Points 3a and 3b, which will inform POM 2013 and POM 2014 investments, respectively.

The Marine Corps will continue to take a holistic approach to its GCTV Strategy. Actions occurring during FY 2012 included:

- Invested in Assault Amphibious Vehicle upgrades in order to improve seamless ship to shore transition
- Accelerated the Marine Personnel Carrier program to provide sufficient lift ashore
- Initiated the Amphibious Combat Vehicle program

based on a revised set of requirements, key performance parameters, and key system attributes

- Assessed the weight, payload, protection, and cost of the Marine Corps light vehicle fleet and determine the appropriate future mix of Joint Light Tactical Vehicles, High Mobility Multi-purpose Wheeled Vehicles (HMMWV) and inform HMMWV recapitalization and reconstitution efforts.
- Examined HMMWV survivability upgrade program to leverage on-hand vehicles.

### ASSAULT AMPHIBIOUS VEHICLE (AAV7A1) FAMILY OF VEHICLES UPGRADE



### DESCRIPTION

Initially fielded in 1972, the Assault Amphibious Vehicle (AAV) remains the primary general-support armor personnel carrier (APC) for Marine infantry. The AAV family of vehicles consists of the AAVP7A1 Reliability, Availability, Maintainability/Rebuild to Standard (RAM/RS) APC and two supporting mission-role variants: AAVC7A1 RAM/RS Command and AAVR7A1 RAM/RS Recovery. The AAV7A1 RAM/RS family of vehicles provides ship-to-shore-to-objective mobility as well as direct fire-support with organic weapons.

Programmed to be replaced by a new amphibious combat vehicle, the AAV7A1 RAM/RS family of

vehicles will continue to serve the Marine Corps until at least 2030. The AAV7A1 RAM/RS family of vehicles previously underwent a series of capability enhancements to improve mobility and reliability and to extend the platforms' service lives.

The AAV Upgrade Program will further improve survivability and land and water mobility of the AAV, serving as a capability bridge to fielding and replacement by a new amphibious combat vehicle. This initiative will improve force protection and platform survivability by integrating technically mature upgrades into the existing hull. These upgrades are slated for approximately 392 AAVP7A1 RAM/RS with potential select upgrades applied to the Command and Recovery variants.

#### OPERATIONAL IMPACT

The upgraded AAV will provide significant survivability improvements through increased protection against current and future threats. Through improvements in physical armor systems and supporting subsystems within the hull of the AAV, the upgraded vehicles will increase protection to embarked Marines and crew.

#### PROGRAM STATUS

The AAV Upgrade Program will enter the acquisition life cycle at Milestone B during FY 2013 and begin the engineering, manufacturing and development phase. Developmental Testing is planned for late FY 2014 followed by Live Fire Testing in FY 2015. Milestone C, authorizing entrance into the Production and Deployment Phase, is scheduled for late FY 2015 and IOC in late FY 2017.

## JOINT LIGHT TACTICAL VEHICLE (JLTV) FAMILY OF VEHICLES (FOV)

### DESCRIPTION

The JLTV FOV is a joint Army/Marine Corps program to procure the next generation of light tactical vehicles and companion trailers. JLTV objectives are to improve the mobility and payload of the light tactical vehicle fleet, while providing increased survivability through modular protection within the weight constraints of the expeditionary force. The JLTV program will also strive to minimize operations and maintenance costs by maximizing vehicle commonality, increased reliability, and better fuel efficiency, while garnering additional procurement savings through effective competition throughout program execution. JLTVs can be configured to support multiple mission packages, derived from two base vehicle configurations, the 4-door Combat Tactical Vehicle and 2-door Combat Support Vehicle. The commonality of components, maintenance procedures, and training among all configurations will minimize total ownership costs.

### OPERATIONAL IMPACT

The JLTV FOV will be capable of operating across a broad spectrum of terrain and weather conditions. The approved JLTV Capabilities Development Document (CDD) identifies the capabilities of the next generation of light tactical vehicles required to support joint forces across the full range of military operations and to provide a vital force enabler, multiplier, and extender.

The joint service program is intended to replace a portion of the Army and Marine Corps High Mobility Multipurpose Wheeled Vehicle (HMMWV) fleet with JLTVs as part of the ground equipment modernization effort. The JLTV's performance characteristics will exceed those of the armored HMMWV Expanded Capability Vehicle (ECV), and will ensure the additional protection and mobility required by the Marine Air Ground Task Force and joint forces. The JLTV FOV will provide the warfighter with increased protection

through the use of scalable armor solutions, while returning light tactical vehicle payloads lost due to the armoring of the HMMWV fleet. The JLTV FOV will also increase warfighter maneuver capacity by providing expeditionary mobility on the modern battlefield. The vehicles will be transportable by CH53 rotary wing aircraft and amphibious/Maritime Prepositioning Squadron ships.

### PROGRAM STATUS

The JLTV CDD was approved by the Joint Requirements Oversight Council in January 2012. The JLTV program is in the Engineering and Manufacturing Development (EMD) phase following a successful Milestone B decision in August 2012. During September 2012 EMD phase contracts were competitively awarded to AM General, Lockheed Martin, and Oshkosh Defense for the design and build of 22 prototypes per vendor. Delivery of the vehicles will be followed by 14 months of government testing. Marine Corps Initial Operating Capability for the JLTV FOV is scheduled for September 2017 with Full Operational Capability occurring in September 2021.

**Developer/Manufacturer:** AM General, Lockheed Martin, and Oshkosh Defense

## AMPHIBIOUS COMBAT VEHICLE (ACV)

### DESCRIPTION

The ACV is a new-start, pre-Major Defense Acquisition Program that will provide an advanced generation, armored, amphibious combat vehicle. The ACV will be the primary means of tactical mobility for the Marine rifle squad — both at sea and ashore. The ACV will autonomously deliver the assault echelon from amphibious shipping at launch distances at or beyond the visual horizon, with speed to enable the rapid buildup ashore, and provide combat-ready Marines at



the objective. The ACV will possess ground mobility and speed similar to the M1A1 during sustained operations ashore and will possess the capability to provide organic, direct fire support to dismounted infantry in the attack. The ACV will protect the force during offensive and defensive operations, providing 360-degree protection against direct fire, indirect fire, mines, and improvised explosive device threats.

The ACV will replace the legacy Amphibious Assault Vehicle that was fielded in 1972 and will be more than 40 years old when ACV is fielded. The ACV will be configured in two mission role variants: Personnel and Command and Control.

### OPERATIONAL IMPACT

The ACV's over-the-horizon launch capability enables the Navy and Marine Corps team to project power from the sea base — and conduct joint forcible entry if required — while providing force protection for the amphibious task force. The ACV will support ship-to-objective maneuver mobility and amphibious maneuver by providing the capability to launch from amphibious ships at operational distances, seamlessly transition between sea and land domains, establish footholds where conditions preclude other types of entry, and enable rapid build-up of combat power before an enemy can react. The ACV will enhance the Ground Combat Element's tactical and opera-

tional mobility with a balanced level of performance, protection and payload. This balance makes the ACV operationally relevant across the full range of military operations. The vehicle will be well protected against the entire range of known and emerging threats while maintaining robust performance requirements in support of the Marine Corps mission profile.

### PROGRAM STATUS

The ACV is in the Material Solution Analysis Phase of the Joint Capabilities Integration and Development System process. An analysis of alternatives (AoA) has been completed. The scope of the AoA included development of life cycle cost estimates for each alternative considering major cost drivers, acquisition and sustainment strategies, and fully burdened cost of energy. The AoA has now paved the way for requirements refinement in an effort to transition the program to the next phase of acquisition development.

## MARINE PERSONNEL CARRIER (MPC)

### DESCRIPTION

The MPC will be effective across the range of military operations during sustained operations ashore and reinforce the assault echelon during forcible-entry operations. Both MPC and the new amphibious combat vehicle will replace the legacy Amphibious Assault Vehicles in the Assault Amphibian (AA) Battalions of Marine divisions. An MPC Company is designed to lift an infantry battalion in conjunction with the infantry's organic wheeled assets. MPC will field a base vehicle (MPC-P) and two supporting mission role variants (MPC-C (command) and MPC-R (recovery)). Two MPC-Ps can transport a reinforced rifle squad. The MPC-C supports mobile battalion command echelon/fire-support coordination center functions and the MPC-R fulfills mobile recovery and maintenance requirements.

### OPERATIONAL IMPACT

The MPC supports expeditionary maneuver warfare and the requirements of the Ground Combat Element maneuver task force by providing a platform that possesses a balance of performance, protection, and payload attributes. The vehicle will be well protected against the full range of known and emerging threats while maintaining robust performance requirements in support of the Marine Corps mission profile (30 percent on road / 70 percent off road). The MPC is effective on land while maneuvering with other wheeled and tracked combat and tactical vehicles, possesses sufficient lethality to protect the vehicle and support dismounted infantry in the attack, and retains sufficient payload to carry the infantry's combat loads, mission-essential equipment, and days of supply. The MPC will meet the many and varied demands of MAGTF operations.

Additionally, the MPC will possess a viable tactical water mobility capability. Although not intended to achieve operational water mobility performance levels (e.g., the over-the-horizon maneuver capability), the MPC will use the sea in the littoral operating area as maneuver space, breach inland water obstacles and thereby increase the MAGTF commander's maneuver, options and the complexity of the threat faced by our enemies.

### PROGRAM STATUS

In June of 2008, the Marine Requirements Oversight Council validated the MPC requirement and approved the solution as an advanced-generation eight-wheeled armored personnel carrier to be integrated into the AA Battalions. The initiative envisions a Materiel Development Decision in FY 2013 or FY 2014, after which the program would enter the acquisition life cycle at Milestone B. The MPC program, once launched, will rely on full and open competition throughout the developmental cycle.



## HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV) EXPANDED CAPACITY VEHICLE (HMMWV-ECV)

### DESCRIPTION

The ECV is the fourth-generation design of the HMMWV and has replaced the aging fleet of baseline A1 variants and some A2 variants. The HMMWV was originally fielded with Marine Corps units in the mid-1980s. Upgrades to the HMMWV ECV include a more powerful and environmentally compliant 6.5L turbo engine, microprocessor controlled engine electronic start system, increased payload (500 pounds), improved corrosion prevention, and access panels to facilitate maintenance.

### OPERATIONAL IMPACT

To successfully accomplish their missions, Marine Air-Ground Task Forces (MAGTFs) require a light tactical vehicle for command and control, troop transport, light cargo and shelter transport, a towed weapons prime mover, and weapons platform throughout all areas of the battlefield or mission area. In addition, 71 Marine Corps component programs use the HMMWV as their prime mover. For units that require specific vehicle configurations, vehicle kits, capable of being installed at the intermediate level of maintenance or below are provided.

### PROGRAM STATUS

Since February 2010, the Marine Corps has procured a limited number of specialty variant ECVs, as the approved acquisition objective for the fleet is being reduced. However, with plans to keep the HMMWV fleet in the Marine Corps inventory until the year 2030, efforts have begun on the HMMWV Sustainment Modification Initiative (SMI) to explore concepts to restore payload, reliability and automotive performance lost due to the increased weight of armoring. An upgraded power train, brakes, suspension, axles, and wheels are among those components and subsystems targeted for

improvement. Four test concepts ranging in capability and cost are scheduled to be designed and built during 2013 for evaluation. Upon conclusion of testing, the Marine Corps will select one SMI concept based upon performance and affordability to go forward with a full and open competition for production. The Marine Corps anticipates fielding the improved HMMWV SMI concept to the Operating Forces beginning in 2016.

Original Developer/Manufacturer:

AM General, South Bend, IN,

HMMWV SMI Vendor: TBD

## MEDIUM TACTICAL VEHICLE REPLACEMENT (MTVR)



### DESCRIPTION

The MTVR program replaced the medium truck fleet (M809/M939) series 5-ton trucks with state-of-the-art commercial automotive technology. The MTVR has an increased payload of 7.1 tons off-road and 15 tons on-road, a high-performance suspension, traction control, central tire inflation system, automatic transmission, and corrosion technology upgrades.

MTVR family of vehicles includes a cargo variant (both standard and extended wheel base configura-



tions), dump truck, a wrecker, and a tractor. The dump and wrecker variants maintain maximum commonality with the basic MTVR cargo chassis while performing their unique missions. The tractor variant serves as the prime mover for the Mk 970 refueling trailer and the M777 155mm howitzer. The Navy also uses MTVR vehicles for Naval Construction Battalion (Seabee) operations. The High Mobility Artillery Rocket System (HIMARS) Re-supply vehicle (and associated trailer) is an MTVR variant that was procured as part of the USMC HIMARS program.

The MTVR Armor System (MAS) provides complete 360-degree protection as well as overhead and underbody protection for the crew compartment using Mil-A-46100 High Hard Steel and Metal Composite standards. It is designed for the 22-year service life of the vehicle. The MAS can withstand small-arms fire, improvised explosive devices, and mines. It includes upgraded suspension, air conditioning system, removable armored troop carrier (with ballistic glass), machine gun mounts, and the Marine Corps transparent armor gun shield. The reducible-height configuration of MAS allows for removal of cab roof to accommodate maritime prepositioned shipping space requirements.

## OPERATIONAL IMPACT

More than 1,000 MTVRs have seen service in support of *Operation Iraqi Freedom*, *Operation Enduring Freedom*, and humanitarian-assistance and disaster-relief missions. With its 70 percent off-road mission profile and highly survivable armor package, the MTVR has been heavily used in contingency operations as well as missions in support of humanitarian operations.

## PROGRAM STATUS

The MAS is installed on all MTVR variants deployed to hostile environments. The MTVR Program Office has continued to improve the MAS in response to Urgent Universal Needs Statements. These improvements include the addition of increased underbody blast protection, fuel tank fire-protection kits, and 300-amp alternator kits (e.g., for powering counter-IED technologies), as well as developing the reducible-height MAS configuration. In addition, live-fire testing has resulted in additional MAS upgrades for non-reducible armored MTVRs and for the armored troop carrier. The program office is developing additional safety and crew protection upgrades, such as an automatic fire suppression systems and emergency egress windshields, in response to additional urgent need statements. The program office is also working with the Office of Naval Research under the Future Naval Capability program to develop a fuel economy upgrade kit. The approved acquisition objective of the MTVR is 8,750 vehicles. A follow-on production order was placed at the end of FY 2012 to procure 207 cargo variants and an interservice exchange agreement with the Navy is being executed for 29 Dump Truck variants toward the goal of achieving the desired variant mix within the approved acquisition objective.

Procurement Profile:	FY 13	FY 14
Quantity:	32	0

Developer/Manufacturer:  
Oshkosh Defense Corporation, Oshkosh, WI

## LOGISTICS VEHICLE SYSTEM REPLACEMENT (LVSR)



### DESCRIPTION

The LVSR replaces the current Marine Corps heavy-tactical wheeled vehicle, the Logistics Vehicle System. The LVSR cargo variant transports several cargos, including: bulk liquids; ammunition; standardized containers; bulk, break bulk, and palletized cargo; and bridging equipment. The LVSR has wrecker and tractor variants as well and is being fielded throughout the Marine Air Ground Task Force (MAGTF). The vehicle base design includes factory-installed floor armor and is also designed to accept an add-on armor kit for increased crew protection.

The vehicle is equipped with an independent suspension system for superior off-road mobility in the most severe environments. The LVSR features an on-road payload capacity of 22.5 tons and an off-road payload capacity of 16.5 tons. Its maneuverability is increased by four-axle steering capabilities. The LVSR is also equipped with advanced electronics system for in-cab diagnostics of the vehicle's critical systems. It uses a single-source lubrication system for easier maintenance and has a 600-horsepower C15 engine.

### OPERATIONAL IMPACT

To successfully accomplish their mission, MAGTFs require a heavy ground logistics distribution system that is highly mobile, efficient, reliable, and flexible. This system must be capable of operating over in-

creased distances with increased payloads. The LVSR will rapidly distribute all classes of supply, while including a self-loading and unloading capability. The LVSR addresses one of the most significant Marine Corps challenges in Afghanistan, that of getting supplies, equipment, and logistics into the remote areas in which Marines routinely operate.

### PROGRAM STATUS

LVSR achieved Initial Operational Capability in September 2009. The original indefinite delivery/indefinite quantity contract for the LVSR was awarded in May 2006 to Oshkosh Defense, Oshkosh, Wisconsin. The approved acquisition objective of the LVSR is 2,000 vehicles. Full-rate vehicle production began in December 2008 and includes add-on armor "B" kits, in addition to the factory-installed integral "A" kit armor. Add-on armor can be applied in the field by maintenance activities. By the end of FY 2012, the full Approved Acquisition Objective of 2000 vehicles was procured consisting of 1489 Cargo variant, 349 Tractor variants, and 162 Wrecker variants. The Program Office and Logistics Command are conducting Reset and Reconstitution planning which may result in additional vehicle procurements.

Procurement Profile:	FY 13	FY 14
Quantity:		
Cargo variant	0	0
Tractor variant	0	0
Wrecker variant	0	0

Developer/Manufacturer:  
Oshkosh Defense Corporation, Oshkosh, WI

# SECTION 3: AVIATION





## AVIATION STRATEGY FOR THE 21ST CENTURY

Across the spectrum of military operations Marine fixed and rotary-wing aircraft shape the battlespace, often in direct support of Marines on the ground. The MAGTF air-ground combined-arms team has proven unequalled in answering the Nation's call across the spectrum of operations, from humanitarian assistance to delivering ordnance on target during crisis and conflict.

Today, the priority is to replace legacy aircraft, some of which have been flying since the Vietnam War, with far more capable aircraft. The Marine Corps challenge is to remain engaged operationally, sustaining the force while executing a transition strategy for the future. In that regard, the FY 2013 Marine Aviation Plan is a phased plan with a ten year and beyond horizon that incorporates force structure changes while balancing active-duty and reserve components of the total force. Our numerous transition task forces are critical enablers; leading the way as we transition from legacy aircraft to new platforms.

The Marine Corps transition strategy can be separated into two mutually supportive, challenging efforts: sustain the legacy fleet and transition to new aircraft. The Aviation Plan is our roadmap for navigating through these challenges, to ensure our continued capability to carry out all six functions of Marine Aviation: (1) assault support; (2) anti-aircraft warfare; (3) offensive air support; (4) electronic warfare; (5) control of aircraft and missiles; and (6) aerial reconnaissance. This "living" document outlines the Marine Corps multiyear transition plan to a dramatically changed fleet, and provides details for:

- Legacy aircraft modernization and sustainment
- Marine Aviation Command and Control System (MACCS) modernization and sustainment
- Aviation Ground Support (AGS) systems sustainment
- F-35B and F-35C Joint Strike Fighter (JSF) transition
- MV-22B Osprey transition
- H-1 upgrades program (UH-1Y and AH-1Z)
- KC-130J transition and Harvest HAWK system introduction
- CH-53K program and heavy lift requirements
- Unmanned aircraft systems (UAS) programs and upgrades
- Operational support aircraft sustainment and upgrades
- Common Aviation Command and Control System (CAC2S)
- AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR)
- Composite Tracking Network (CTN)

## F-35B SHORT TAKE-OFF VERTICAL LANDING (STOVL) AND C (CARRIER VARIANT) LIGHTNING II JOINT STRIKE FIGHTER (JSF)



### DESCRIPTION

The F-35 JSF is the next generation strike weapons system designed to meet an advanced threat, while improving lethality, survivability, and supportability. It will be the cornerstone of a multi-mission joint force possessing improved mission flexibility and unprecedented effectiveness to engage and destroy both air and ground threats. The F-35 is designed to participate in a wide variety of operations from routine, recurring military activities, to Major Theater War, and peace-keeping operations.

The F-35 was developed using a complete analysis of legacy aircraft shortfalls, emerging threats, and consideration of future operating locations. This approach led to an aircraft design that incorporates advanced stealth characteristics and a powerful sensor suite that provides superior awareness to the pilot and ensures increased survivability and lethality in all environments.

The F-35 has an autonomous capability to strike a broad range of moving or fixed targets, either day or night and in adverse weather conditions. These targets include air and ground threats, as well as enemy surface units at sea and anti-ship or land attack cruise missiles. The F-35 can complete the entire kill chain

without reliance on external sources by using fused information from its onboard systems and/or other F-35s. This capability allows shortened engagement times, less exposure to threats, and retains the element of surprise. Together these elements allow the pilot to control the tactical environment using proactive tactics. When operating in a less restrictive environment the F-35 provides sensor data to Marine Air-Ground Task Force (MAGTF) command and control agencies to enable intelligence collection and targeting across the force.

The F-35 brings unprecedented lethality, survivability, and maintainability never possible in legacy fighter attack aircraft. These attributes have been designed into the aircraft from the beginning of the process and ensure flexibility to counter even more sophisticated threats as they emerge.

### OPERATIONAL IMPACT

The F-35 JSF brings strategic agility, operational flexibility and tactical supremacy to the MAGTF. The F-35B variant unites fifth generation stealth, precision weapons and multi-spectral sensors with expeditionary responsiveness of a Short Take-off and Vertical Landing (STOVL) fighter-attack platform. The F-35B will replace AV-8B, F/A-18A/C/D, and EA-6B aircraft. Having a single aircraft capable of performing all these missions decreases logistical requirements and increases operational effectiveness.

The F-35 is a force-multiplier for the MAGTF commander. It can operate without degradation within anti-access or highly contested airspace providing an advanced engagement capability that is not possible with legacy aircraft. The F-35 fuses information from all of its sensors and displays it to the pilot on large panoramic cockpit displays. This comprehensive and intuitive display provides complete situation awareness to the pilot, showing the location and status of both enemy and friendly forces.

The ability for the F-35 to accomplish the entire kill chain independently minimizes reliance on other

support aircraft. This reduces logistical requirements, further decreasing strains on MAGTF resources.

### PROGRAM STATUS

Highlights of the F-35B program:

- May 12: VMFAT-501 begins F-35B flight operations at Eglin Air Force Base
- September 12: 948 total F-35B flights
- October 2011: L Class ship trials
- Estimated Initial Operational Capability (IOC): Late 2015
- Estimated Full Operational Capability (FOC): TBD

Procurement Profile:	FY 13	FY 14
Quantity:	6	6

Developer/Manufacturer:  
Lockheed Martin, Fort Worth, TX

ability, and supportability compared to those of legacy aircraft.

The VMFAT-501 “Warlords,” the first Marine Corps JSF STOVL training squadron, stood up on April 2, 2010 as part of the JSF Integrated Training Center at Eglin AFB, FL. VMFAT-501 will be assigned to 2d Marine Aircraft Wing for operational control and administrative control, but the Warlords will maintain a command training relationship and co-location with the U.S. Air Force 33rd Fighter Wing. Students are expected to start training in 2012. The Operational Test and Evaluation (OT&E) detachment stands up at Edwards AFB during 2014 and commences Block 2.0 OT&E in 2015.

The Marine Corps will acquire 357 STOVL aircraft and 63 CV aircraft for a total of 420 JSFs. Once the F-35 enters service, the Marine Corps will begin retirement of AV-8Bs and F/A-18A-Ds. All legacy tactical strike aircraft platforms should be retired by 2031.

## JOINT STRIKE FIGHTER (JSF) TRANSITION PLAN



The Marine Corps will employ the F-35B and F-35C to support the six functions of Marine Corps aviation. This remarkable breadth of employment will allow the Marine Corps to decrease its tactical aviation inventory while increasing aircraft lethality, surviv-

## MARINE AIR GROUND TASK FORCE ELECTRONIC WARFARE (MAGTF EW)

### DESCRIPTION

The USMC’s EA-6B Prowler will be decommissioned by the end of FY 2019. This “sundown” plan, combined with rapidly changing dynamics in the electromagnetic operating environment (EMOE), compels an evolutionary approach to the complex problem set of electromagnetic spectrum (EMS) control.

The Marine Corps will address its electronic warfare requirements through a concept known as MAGTF EW, an integrated family-of-systems approach of distributed, platform-agnostic attack and receive capabilities. Far from a compromise plan for the retirement of the EA-6B, the MAGTF EW strategy will unite air, land, and sea-based EMS-dependent technologies to ensure collaborative, efficient, and effective control of the EMS.



Future growth of MAGTF EW will allow for the progressive inclusion of technologies and capabilities from other Services and commercial vendors. At present, the following capabilities comprise the MAGTF EW portfolio in development:

- **Intrepid Tiger II (IT-2)** – A modular, commercial-off-the-shelf based Electronic Warfare pod designed to address irregular warfare targets. The V(1) variant will fly aboard tactical aircraft (TACAIR) assets, the V(2) will fly aboard unmanned aerial systems (UAS), and the V(3) will fly aboard rotary-wing airframes.
- **Software Reprogrammable Payload (SRP)** – A small-format, software-definable, multi-channel, radio-reprogrammable digital technology for radio relay, network management/monitoring, internet

routing, and dynamic bandwidth allocation. SRP contributes to MAGTF EW by providing robust EMS maneuver and adaptability in stressed EMOEs.

- **EW Service Architecture (EWSA)** – An extensible data exchange and hardware protocol intended to connect EW/SIGINT airborne nodes to ground Operators, Cyber/EW Control Cells (C/EWCCs), and other air EW nodes. EWSA will provide “on-demand EW fires” in operational conditions under C/EWCC control, and will unite Air EW, Ground EW and SIGINT via an adaptive network with multiple waveforms. Additionally, EWSA will also provide basic digital interoperability between air platforms.



## OPERATIONAL IMPACT

The Marine Corps operational dependence upon the EMS is increasing in amount, type, density, and complexity. Active pursuit of the MAGTF EW strategy allows the Corps an opportunity to replace the low-density, platform-centric EA-6B Prowler capability with a scalable, organic, adaptable and cost-effective system-of-systems for EMS control. This system will be equally applicable across the range of military operations. When fully realized, MAGTF EW will constitute an improvement over current capabilities.

## PROGRAM STATUS

The Marine Requirements Oversight Council approved the *MAGTF EW Information Systems Initial Capabilities Document* (IS ICD) in September 2012. MAGTF EW is a distinct program of record and is funded against the FY 2014 FYDP.

IT-2 Block 0 is currently deployed in early operational capability status on AV-8B Harriers. IT-2 Block 1 will incorporate EW Support / surveillance capabilities, and the later Block X variant will move beyond irregular warfare targets to include counter-radar capabilities.

SRP has demonstrated capability in live-flight tests aboard the KC-130J. The next spiral of SRP may incorporate TTNT waveform capability, Link-16, and advanced NSA-accredited crypto capabilities.

EWSA functionality has been demonstrated in tactical demonstrations, with more demonstrations of increasing complexity planned. EWSA is being shared with Army EW, and interested commercial vendors, to pursue new capabilities from a normalized frame of reference and to encourage its adoption by other agencies.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
Various (NAVAIR, NRL, and prospective commercial vendors)

## MV-22B OSPREY



## DESCRIPTION

The V-22 Osprey tilt-rotor aircraft, the only such operational military aircraft in the world, is an advanced-technology vertical/short takeoff and landing (VSTOL), multi-purpose tactical aircraft that is replacing the current fleet of Vietnam-era CH-46E & CH-53D helicopters. The V-22 is a multi-mission aircraft designed for use by the Marine Corps, Navy, and Air Force.

The USMC variant, the MV-22B, joins the Joint High-Speed Vessel (JHSV) and Landing Craft Air Cushion (LCAC) as the sea-basing connectors necessary to execute expeditionary maneuver warfare. Specific missions for the MV-22B include expeditionary assault from land or sea, medium-lift assault support, aerial delivery, tactical recovery of aircraft and personnel, air evacuation, and rapid insertion and extraction.

The MV-22B design incorporates sophisticated and mature composite materials technology, “fly-by-wire” flight controls, advanced manufacturing processes, and digital cockpits. The MV-22B’s prop-rotor system, engine, and transmissions are mounted on each wingtip and allow it to operate as a helicopter for takeoff and landing. Once airborne, the nacelles rotate forward 90 degrees, transitioning the MV-22B into a high-speed, high-altitude, and fuel-efficient turboprop aircraft.

**OPERATIONAL IMPACT**

The MV-22B is becoming the cornerstone of Marine Corps assault support capability, with the speed, endurance, and survivability needed to fight and win on tomorrow’s battlefield. This combat multiplier represents a quantum improvement in strategic mobility and tactical flexibility for expeditionary forces. The Osprey has a 325-nautical mile combat radius, can cruise at 262 knots, and is capable of carrying 24 combat-equipped Marines or a 12,500-pound external load. With a 2,100 nautical-mile single-aerial refueling range, the aircraft also has a strategic self-deployment capability.

**PROGRAM STATUS**

The Marine Corps transition from the CH-46E to the MV-22B continues at the approximate rate of 3 Ospreys delivered per month and two squadrons transitioned per year. Production of the MV-22B is based on a block production strategy, which is designed to provide continual lifecycle and capability improvements throughout the lifetime of the platform.

Block A aircraft are designed to serve as non-deployable training aircraft, and they include software enhancements, a nacelle reconfiguration, and additional reliability and maintainability improvements compared to the original aircraft design. As of January 2013, 30 Block A aircraft have been delivered and are primarily in service at Marine Corps Air Station New River.

Block B aircraft are the deployable configuration of the MV-22B Osprey. These aircraft provide improvements in effectiveness and maintainability for operators and maintainers, including improved access to the nacelle for inspection purposes and substantial reliability and maintenance improvements across the entire platform. As of January 2013, 108 Block B aircraft have been delivered to the fleet.

Block C aircraft incorporate mission enhancements and increased operational capability. Enhancements include weather radar, a forward-firing

ALE-47 dispenser, improved hover coupled features, an improved environmental conditioning system, and a troop commander situational awareness station. As of January 2013, 31 Block C aircraft have been delivered to the fleet.

Procurement Profile:	FY 13	FY 14
Quantity:		
Block C	17	18

Developer/Manufacturer:  
 Bell Helicopter Textron, Fort Worth, TX  
 The Boeing Company, Philadelphia, PA

**H-1 UPGRADES  
 (UH-1Y VENOM/AH-1Z VIPER)**



**DESCRIPTION**

The H-1 program (UH-1Y/AH-1Z) replaces the current two-bladed rotor system on the UH-1N and AH-1W aircraft with new four-bladed, all-composite rotor systems coupled with a sophisticated, fully integrated, state-of-the-art cockpit in both aircraft models. The UH-1Y and AH-1Z also incorporate new performance-matched transmissions, a four-bladed tail rotor, and upgraded landing gear. Additionally, structural modifications to the AH-1Z provide the aircraft six weapons stations, two more than on the AH-1W. The advanced cockpit common to both aircraft reduces



operator workload, improves situational awareness, and provides growth potential for future weapons and joint interoperability. The cockpit integrates onboard planning, communications, digital fire control, self-contained navigation, day/night targeting and weapons systems in mirror-imaged crew stations.

### OPERATIONAL IMPACT

The UH-1Y Venom (commonly referred to as “Yankee”) and the AH-1Z Viper (referred to as “Zulu”) share 85 percent of replaceable components, which significantly benefit Marine Air Ground Task Force maintainability and supportability. The H-1 program effectively mitigates the narrow power margins of the UH-1N and the high aircrew workloads of the AH-1W while enhancing tactical capability, operational effectiveness and sustainability of our attack and utility helicopter fleet.

UH-1Ns are being rapidly pushed towards retirement due to airframe and engine fatigue, which routinely force aircrew into flight regimes with narrow power margins and little room for error. Continued implementation of the “Yankee Forward” strategy — an effort to accelerate replacement of UH-1Ns with the new UH-1Ys as quickly as possible — is a top Marine Corps aviation priority. Significant operational demands, aircraft attrition, and the current shortfall of attack and utility helicopters, has forged the Marine Corps “build new” strategy for its UH-1Y and AH-1Z

fleet. The success of this effort will more rapidly reduce the current USMC Attack helicopter shortfall.

The UH-1Y conducted its first deployment with the 13th Marine Expeditionary Unit (MEU) in 2009 and has been deployed to Afghanistan since October 2009. Transition to the UH-1Y is complete at Marine Air Group (MAG)-39 and has shifted to MAG-29 on the East Coast. The first AH-1Z deployment was with the 11th MEU in November 2011. Of note, this is the first time the AH-1Z and UH-1Y have deployed alongside each other; fully exploiting the benefits of 85 percent commonality.

### PROGRAM STATUS

Ninety-two production aircraft (66 UH-1Ys and 26 AH-1Zs) were delivered through the end of Oct 2012. The UH-1Y achieved Initial Operational Capability in August 2008 and the AH-1Z achieved IOC in February 2011. The H-1 Upgrades overall procurement objective is 160 UH-1Ys and 189 AH-1Zs.

Procurement Profile:	FY 13	FY 14
Quantity:	28	27

#### Developer/Manufacturer:

Airframe: Bell Helicopter Textron Inc., Fort Worth, TX

Integrated Cockpit: Northrop Grumman, Woodland Hills, CA

AH-1Z Target Sight System: Lockheed Martin, Orlando, FL

### KC-130J

#### DESCRIPTION

The KC-130J is a versatile four-engine tactical air-to-air refueling and assault-support aircraft which provides the only organic long-range, fixed-wing assault-support capability to the Marine Corps. The KC-130J features increased efficiency over legacy KC-130 variants. The Rolls Royce AE 2100D3 propulsion system with Dowty R391 advanced-technology six-bladed



propeller system provides thirty percent more thrust, twenty four percent faster time to climb and twenty percent better fuel efficiency.

A state-of-the-art flight station and integrated advanced defensive system enables fewer aircrew to perform the same missions. Other improvements include an advanced cargo ramp and door, capable of operating at airspeeds up to two hundred fifty knots and an improved air-to-air refueling system which enables increased fuel transfer rates without requiring the installation of the fuselage fuel tank. All active component legacy KC-130 aircraft have been replaced with KC-130Js. Once reserve component squadrons have transitioned to the KC-130J, the Marine Corps will have one type, model, and series of this versatile aircraft.

#### OPERATIONAL IMPACT

The KC-130J provides tactical air-to-air refueling for fixed-wing, rotary-wing, and tilt-rotor aircraft; rapid ground refueling of aircraft or tactical vehicles; assault air transport of air-landed or air-delivered (parachute) personnel and equipment; airborne command and control augmentation; pathfinder support; battlefield illumination; tactical aero-medical evacuation; and is an enabler for tactical recovery of aircraft and personnel.

In response to an Urgent Universal Need, the Marine Corps has acquired a bolt-on/bolt-off Multi-Sensor Imagery Reconnaissance (MIR)/Weapon Mission Kit for KC-130J aircraft. This kit, known as Har-

vest HAWK, rapidly reconfigures the KC-130J aircraft into a platform capable of performing persistent MIR, targeting and delivery of precision fires using Hellfire as well as Griffin and Viper strike stand-off precision guided munitions. The KC-130J brings increased capability and mission flexibility to combat planning and operations.

#### PROGRAM STATUS

The Marine Corps KC-130J requirement (active and reserve) is seventy-nine aircraft. The KC-130J is currently in production with forty-six aircraft delivered. A forty-seventh KC-130J is on contract for delivery by May 30, 2014. Initial Operational Capability was achieved in February 2005.

Procurement Profile:	FY 13	FY 14
Quantity:	0	2

#### Developer/Manufacturer:

Lockheed Martin Aeronautics Company, Marietta, GA

#### CH-53K HEAVY LIFT HELICOPTER DESCRIPTION

The CH-53K is critical to sea-based expeditionary maneuver warfare for the Marine Corps of 2025. As Marine Air Ground Task Force (MAGTF) equipment gets heavier, demand for vertical heavy lift assets increase. Heavier equipment, such as up-armored High Mobility Multipurpose Wheeled Vehicles (HMMWVs), the future Joint Light Tactical Vehicle (JLTV), and the Light Armored Vehicle (LAV) eliminate medium-lift assets as lift platforms and increase demand for the heavy-lift CH-53K.

The CH-53K provides the Marine Corps with the ability to transport 36,000 pounds of external cargo and is specifically designed to lift 27,000 pounds of cargo up to 110 nautical miles in support of future warfighting concepts. The CH-53K generates nearly





three times the external lift capability of the CH-53E under the same environmental conditions, while fitting within the same shipboard footprint. Performance improvements enable vertical insertion of dual-slung up-armored HMMWVs, the JLTV, LAV, or three individually tailored resupply loads delivered to three different operating bases using the independent triple-hook external load system.

The CH-53K provides unparalleled lift and range capability under high-temperature and high-altitude austere conditions, similar to those found in Afghanistan, thereby greatly expanding the commander's operational reach. It is the only fully "marinized" helicopter that can lift 100 percent of MAGTF equipment from amphibious shipping to inland objectives. The CH-53K, having more lift capacity than present day heavy-lift assets, becomes the aircraft of choice to minimize the MAGTF footprint while maximizing operational efficiency.

Major system improvements include more powerful engines, an increased lift capability, an enhanced drive train, advanced composite rotor blades, a modern digital cockpit, improved external and internal cargo handling systems, and increased survivability and force-protection measures. The CH-53K is designed to greatly improve heavy-lift performance and survivability while reducing shipboard logistical requirements, operating costs, and direct maintenance man hours-per-flight hour compared to the CH-53E.

### OPERATIONAL IMPACT

CH-53K maintainability and reliability enhancements decrease recurring operating costs significantly, while improving aircraft efficiency and operational effectiveness compared with the CH-53E. Survivability and force protection enhancements significantly increase protection for aircrew and passengers. The CH-53K will transport three independent external loads tailored to individual unit requirements and provide the critical logistics air bridge to facilitate sea-based and distributed operations.

### PROGRAM STATUS

In 2012, the CH-53K program made significant progress. The Ground Test Vehicle (GTV) completed assembly in Oct at Sikorsky's Florida Assembly and Flight Operations (FAFO) facility in West Palm Beach, Florida, and entered the system validation test phase. The GTV will undergo tests ensuring safe operations of the Engineering Development Model (EDM) flight vehicles. All four EDM's are currently in assembly at FAFO, EDM-1 is 40 percent complete and will deliver in Oct 2013, and will conduct the first CH-53K flight in 2014. Milestone C is scheduled for FY16 with Initial Operating Capability scheduled for the first quarter of fiscal year 2019.

General Electric (GE) continues to make great strides with the CH-53K GE38 engine. A new engine, specifically developed to power the CH-53K, the GE38 has achieved over 2400 successful test hours and recently completed the rigorous 1000 hour Missionized Durability Testing. The GE38 (required to produce 7500 shaft-horse-power) has sustained 7760 SHP and peaked at a robust 8300 SHP.

The first Marine Maintenance Detachment and Integrated Test Team will arrive at FAFO in January 2013. The maintenance detachments will function as work center supervisors, training other Marines on the CH-53K, and assisting in logistics support development. These Marines will also assist in the assembly of all four EDM's and support subsequent tests. The In-

tegrated Test Team will work hand-in-hand with their Sikorsky counterparts in test plan development and implementation.

The Foreign Military Sales (FMS) potential of this aircraft continues to grow. Milestone C marks the first opportunity for the U.S. Government to establish FMS contracts with foreign governments, with several countries already expressing interest in the CH-53K.

Developer/Manufacturer:

Sikorsky Aircraft Corporation (SAC), United Technologies Corporation (UTC), Stratford, CT

## UNMANNED AIRCRAFT SYSTEMS (UAS)



### DESCRIPTION

The Marine Corps has employed UAS since 1986. Since 2001, the demand for dedicated aerial reconnaissance aircraft has grown exponentially, and UAS have played a critical part in supporting the aerial reconnaissance requirement. The Marine Corps has refined its UAS requirements and concept of operations (CONOPS) and has begun the procurement and fielding of improved systems at every level of the Marine

Air Ground Task Force (MAGTF).

The Marine Corps UAS CONOPS divides UAS requirements into three levels that coincide with the various echelons of command in the MAGTF. The larger and more capable systems support higher levels of command, whereas the smaller but more numerous systems directly support lower tactical units.

USMC UAS Requirements include the following:

- Marine Corps Tactical UAS (MCTUAS): RQ-7B Shadow
- Small Tactical UAS (STUAS): RQ-21A Integrator
- Small UAS (SUAS): RQ-11B Raven



### OPERATIONAL IMPACT

The Marine Expeditionary Force (MEF) and Marine Expeditionary Brigade (MEB) are supported by MCTUAS, the largest of our UAS systems, the RQ-7B Shadow UAS. The first system was deployed with VMU-1 to support *Operation Iraqi Freedom* in September 2007. Employing MCTUAS electro-optical and infrared (EO/IR) sensors, communications relay payloads, and laser designators, commanders on the ground have increased visual and communications access within their areas of responsibility. The VMU squadron supports the Marine Corps Ground Combat Element (GCE) with route reconnaissance, fires integration and force-protection prior to, during, and post-mission.

### PROGRAM STATUS

RQ-7B Shadow programmed upgrades include tactical common data link (TCDL), UHF capability,

weaponization, and a universal ground control station (UGCS) that will increase joint interoperability with other aircraft, UAS, and data systems. Procured as a near-term solution to shortfalls in the older RQ-2B program, the RQ-7B provides multiple capabilities to the MAGTF. Upgrades to the RQ-7B are planned through FY 2018. These upgrades will support the transition to a larger (Group-4) UAS that will provide the MAGTF with persistent ISR, strike, and electronic warfare, on board a faster UAS platform with an improved endurance and payload capacity while maintaining an expeditionary footprint.

#### OPERATIONAL IMPACT: SUAS

The Marine Expeditionary Unit (MEU) and the infantry regiment are supported by STUAS, with supporting personnel sourced as detachments from the VMU. The STUAS system is designed to provide reconnaissance, communications relay, and target acquisition in support of the GCE. The Marine Corps currently provides STUAS support to the GCE with the Aerosonde UAS under an ISR services contract with AAI.

#### PROGRAM STATUS: RQ-21A INTEGRATOR

The Marine Corps selected the RQ-21A Integrator (produced by Insitu Inc.) as a government-owned material solution for the STUAS requirement. As 32 RQ-21 systems are fielded, they will replace the remaining contract intelligence, surveillance and reconnaissance (ISR) services in *Operation Enduring Freedom*. The RQ-21A program is in Engineering Manufacturing and Development and is planned for IOC in the fourth quarter of FY 2013.

#### PROGRAM STATUS: RQ-11B RAVEN

The RQ-11B Raven is produced by AeroVironment Inc. In 2008, 439 RQ-11 systems began replacing the older RQ-14 Dragon Eye. The Marine Corps has also purchased limited quantities of the smaller Wasp III

UAS (also produced by AeroVironment Inc.) to perform a user assessment for a potential add to the UAS family of systems.

#### OTHER UAS APPLICATIONS

**Cargo UAS** has been added as an initiative to enhance our assault support capabilities and to reduce the vulnerability of ground logistics supporting Marines stationed at remote combat outposts. Two Lockheed Martin/Kaman KMAX Cargo UAS deployed to OEF in 2011 in support of a Military User Assessment with the VMU as a government-owned/contractor-operated cargo UAS service. The MUA will help to form future CONOPS and a formal program of record that will provide the MAGTF with a UAS system capable of cycling five tons of supplies between a support base and remote outpost within a 24-hour period.

**Electronic Attack and UAS.** The Marine Corps will incorporate an electronic warfare (EW) capability into current and future UAS platforms, partly to address the eventual retirement of EA-6B Prowlers. This UAS EW capability will comprise a portion of the system-of systems-approach by which electronic warfare capabilities are distributed across manned and unmanned aerial systems. The system-of systems approach allows the nation to move away from low-density/high-demand assets (such as the EA-6B) and make EW ubiquitous across the battle space.

Procurement Profile:	FY 13	FY 14
Quantity:		
RQ-7B (MCTUAS)	0	0
RQ-21 (STUAS)	4	4
RQ-11 (SUAS)	13	0

## AN/TPS 80 GROUND/AIR TASK ORIENTED RADAR (G/ATOR)



### DESCRIPTION

The AN/TPS-80 G/ATOR is a highly expeditionary, three-dimensional, short-to-medium-range multi-role radar designed to detect low-observable, low-radar cross section targets such as rockets, artillery, mortars, cruise missiles, and unmanned aircraft systems. The G/ATOR is being developed and fielded in three increments and will be employed by the Marine Air Ground Task Force (MAGTF) across the range of military operations. The three increments will cover both ground and aviation missions and will replace three in-service legacy radars and the functionality of two retired systems.

Increment I is the air defense/surveillance radar (AD/SR). It will provide real-time radar measurement data to the Tactical Air Operations Center through the TYQ-23(V)4 Tactical Air Operations Module, TSQ-269 Mobile Tactical Air Operations Module, Composite Tracking Network, and the Common Aviation Command and Control System. Increment I can also function as a short-range air-defense radar and will provide fire control quality data to a future ground-based air-defense weapon system. Increment II will fill the ground weapons locating radar requirement and will provide a counter-battery and target acquisition capability for the Ground Combat Element. Increment IV is the expeditionary airport surveillance radar and will provide air traffic control capabilities to the MAGTF.

G/ATOR consists of three major subsystems: the radar equipment group (REG), the communications equipment group (CEG), and the power equipment group (PEG). The REG is integrated radar and trailer combination towed behind a medium-tactical vehicle replacement (MTVR) platform. The CEG is a palletized communications and radar control systems transported by the armored M1151A1 High-Mobility Multi-purpose Wheeled Vehicle. The PEG is a pallet assembly containing a tactical generator, cables, and ancillary equipment transported in the bed of the MTVR.

The REG, CEG, and PEG without prime movers are considered mission-essential equipment and are rapidly deployable via heavy-lift helicopters, tilt-rotor aircraft, KC-130s, or ground vehicles during the initial stages of operations. This system can augment sea-based air-defense sensors and command and control capabilities. G/ATOR will provide naval and joint forces with an expeditionary radar and cruise missile detection capability that extends landward battlespace coverage. When fully fielded, the diverse capabilities of G/ATOR and the many warfighting functions it supports will make it a highly valued asset to the MAGTF commander.

### OPERATIONAL IMPACT

G/ATOR's expeditionary, multi-role capabilities represent the next generation of ground radar technology. This radar will provide crucial enhancements to warfighting capabilities for Marine Corps and joint force commanders, as it possesses greater range, accuracy and detection capabilities against current and emerging threats. The G/ATOR will also provide increased mobility, reliability and improved situational awareness with the ability to act as the landward extension of seabased defenses and enable strikes against inland targets.

### PROGRAM STATUS

The AN/TPS-80 G/ATOR was designated an ACAT IC by the Under Secretary of Defense for Acqui-



sition, Technology and Logistics in October 2011. The Department of the Navy will continue to be the lead acquisition agency for G/ATOR. G/ATOR is currently in Developmental Testing (DT); the final phase of DT and the Operational Assessment for G/ATOR will be conducted in Yuma, AZ in early 2013, with a Milestone C Low-Rate Initial Production Decision to follow. The approved acquisition objective is 57 units.

Procurement Profile:	FY 13	FY 14
Quantity:	2	0

Developer/Manufacturer:  
Northrop Grumman Electronic Systems,  
Linthicum, MD

### P-19A AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) VEHICLE REPLACEMENT (P-19R)



#### DESCRIPTION

The P-19A Aircraft Rescue Fire Fighting (ARFF) Vehicle Replacement is intended to replace the A/S32 P-19A Aircraft Crash and Structure Fire Fighting Truck, known as the P-19A. The P-19A was introduced into service in 1984, with an intended service life of 12 years but has been in service in excess of 28 years. The primary mission of the P-19R is fighting aircraft fires and crew rescue. The secondary mission of the vehicle

is to fight other types of fires, such as brush and structural fires. The P-19A is currently the Marine Corps sole tactical Aircraft Fire Fighting Vehicle capable of supporting both garrison and expeditionary air fields.

The P-19R ARFF vehicle will meet both the 2012 National Fire Protection Association - 414 standards and the expeditionary firefighting and aircraft rescue requirements of the Marine Corps. This program will replace P-19A's at both Operational Force (OPFOR) units and Garrison Mobile Equipment (GME) Air Facilities located at the Bases and Stations. The legacy P-19A cannot be economically upgraded to meet the mandated in the 2012 NFPA 414 standards. Most predominantly absent on the P-19A's are various crew safety-related upgrades including; three-point crew restraints, anti-lock braking, and roll-over warnings.

The P-19R will have functional capabilities to minimize the consequences of fire and emergency incidents including: fire suppression and extinguishment on aircraft and structures, crew extrication and rescue. Capabilities include the ability to seat a four person crew and meeting USMC mobility and transportability requirements at base and stations, and forward operation bases. It is equipped with fire suppression compounds and extinguishing agents, handheld extinguishers, and specialized rescue tools to extinguish aircraft fires, protect rescue personnel, cool explosive ordnance, extract aircrews, and successfully accomplish each rescue mission.

#### OPERATIONAL IMPACT

The P-19R can be transported to the area of operations via strategic airlift (C-17 (Threshold) and C-5 (Objective) aircraft) or surface platforms. The legacy P-19A fleet is undergoing critical readiness issues stemming from reliability and electrical failures due to the age of the vehicles. The current P-19A is a maintenance challenge to station and wing mechanics, resulting in less than 75 percent material readiness levels.



### PROGRAM STATUS

The P-19R Capabilities Development Document has been signed by Deputy Commandant, Combat Development & Integration, and the program should receive its Milestone B decision in the second Quarter of FY 2013. The original Authorized Acquisition Objective (AAO) of 180 vehicles is anticipated to be reduced to 164 based on the MIP trade space review. The Solicitation has been approved, RFP released and proposals are due in December of 2012. The P-19R Initial Operational Capability (IOC) is planned for FY 2016. IOC is achieved when one MWSS has received a complete issue of P-19Rs; the assigned mechanics and crews have received initial training at the operator/crew, field and sustainment levels; and sufficient repair parts are in place to support operations. The Marine Corps is pursuing P-19R Full Operating Capability by FY 2020 to meet the AAO.

Procurement Profile:	FY 13	FY 14
Quantity:		
Test Articles	2	0
Low Rate Initial Production	0	4

Developer/Manufacturer: TBD



## SECTION 4: FIRE SUPPORT





## EXPEDITIONARY FIRE SUPPORT SYSTEM (EFSS)



### DESCRIPTION

The EFSS is the third and final system of the land-based fire-support triad that also includes the Lightweight 155mm Howitzer and the High-Mobility Artillery Rocket System (HIMARS). Accompanying Marine Air-Ground Task Forces (MAGTFs) in all types of expeditionary operations, EFSS is the primary indirect fire-support system for the vertical assault element of the ship-to-objective maneuver force. As such, the EFSS mortar section — the M327 120mm Rifled Towed Mortar, the Prime Mover Weapon, the Prime Mover Trailer, and Ammunition Trailer with a basic load of ammunition — and its crew are internally transportable by two CH-53 helicopters or two MV-22B tilt-rotor aircraft, and possess the greatest possible range and flexibility of employment for operational maneuver from the sea.

### OPERATIONAL IMPACT

The EFSS expands the maneuver commander's spectrum of fire-support options and capabilities to successfully engage a spectrum of point and area targets, including motorized, light armored, and dismounted personnel; command and control systems; and indirect-fire systems. The EFSS affords the MAGTF commander increased flexibility in tailoring his fire-support systems to support the scheme of maneuver.

EFSS-supported units are particularly well suited for missions requiring speed, tactical agility, and vertical transportability. The EFSS design and configuration ensure that its tactical mobility, in the air and on the ground, is equal to that of the force supported.

### PROGRAM STATUS

The EFSS Program is in production and deployment. Full rate production was approved in June 2008 and Initial Operational Capability was achieved in March 2009, when one artillery regiment received six EFSS. The EFSS Approved Acquisition Objective (AAO) has been procured and will complete delivery and fielding during 2013.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
General Dynamics Ordnance and Tactical Systems,  
St. Petersburg, FL

## TARGET LOCATION, DESIGNATION, AND HAND-OFF SYSTEM (TLDHS)

### DESCRIPTION

A joint fires/combined-arms tool, the TLDHS is a modular, man-portable equipment suite that provides the capability to quickly and accurately acquire targets in day, night, and near-all weather visibility conditions. It is the first system within the Department of Defense approved for fielding that allows observers to control Close Air Support (CAS) as well as artillery and naval fire-support missions on a single system using digital communications.

### OPERATIONAL IMPACT

TLDHS enables operators to conduct target acquisition and target hand-off to fire support agencies using existing and planned communications equipment

to support maneuver units of the Marine Air Ground Task Force. Operators are able to accurately determine and designate a target’s location and then digitally transmit (hand-off) these target data to supporting-arms elements. The TLDHS employs a laser designator for precision-guided munitions and laser spot trackers, and it also generates accurate coordinates for global positioning system-guided weapons, including Excalibur rounds and Joint Direct Attack Munitions. The primary operators are forward air controllers (FAC) and joint terminal attack controller (JTAC) for CAS, forward observers (FO) and joint forward observers for field artillery missions, firepower control teams of the air and naval gunfire liaison companies, Marine Corps Special Operations Command, and the supporting training commands.

TLDHS is interoperable with several systems, including AFATDS, Naval Fire Control System, Joint Tactical Common Operational Picture Workstation Gateway, Common Laser Range Finder, and the PRC-117 Tactical Combat Net Radio. Tactical air control parties often employ TLDHS in conjunction with intelligence, surveillance and reconnaissance assets.

**PROGRAM STATUS**

TLDHS Block II is in sustainment. TLDHS Block II provides extended CAS functionality for the FAC/JTAC via enhanced digital interfaces with the A-10, F-16, AV-8B and F/A-18 aircraft. Block II also adds the ability for FOs to conduct indirect-fire missions via the AFATDS. Block II hardware is being refreshed in FY 2013 and FY 2014.

Procurement Profile:	FY 13	FY 14
Quantity:		
(Block II hardware refresh)	200	200

Developer/Manufacturer:  
 Stauder Technologies, Saint Peters, MO

**MISSION PAYLOAD MODULE–NON-LETHAL WEAPONS SYSTEM (MPM-NLWS)**



**DESCRIPTION**

The Mission Payload Module–Non-Lethal Weapons System (MPM-NLWS) will allow Marine Corps forces to conduct counter-personnel missions by providing a new vehicle-mounted, non-lethal tube-launched munitions delivery system capable of suppressing human targets (i.e., the ability to degrade one or more functions or capabilities of a human target to render it ineffective) with minimal risk of significant injury. The MPM-NLWS will mount onto the Marine Corps Transparent Gun Shield (MCTAGS) on the High-Mobility, Multipurpose, Wheeled Vehicle (HMMWV) or its replacement. Increment One of the MPM-NLWS will deliver an enhanced pyrotechnic (thermobaric effect) munition from a tube-launch system. Future increments of the MPM-NLWS may include mounting the system to additional vehicles (e.g., Light Armored Vehicle (LAV), Medium Tactical Vehicle Replacement, Joint Light Tactical Vehicle, and naval vessels. In addition, future increments may include additional munitions — including obscuration, illumination, and other rounds — to provide a more flexible response capability and enable the system to address future emerging capability gaps.

### OPERATIONAL IMPACT

Compared to current non-lethal weapon systems, the MPM-NLWS will provide significant improvements primarily in range, standoff distance, duration of effects, area coverage, volume of fire, and non-lethal effects. MPM-NLWS munitions will be designed to suppress personnel with minimal risk of significant injury and can be selectively employed in order to provide a graduated response option to scenarios involving crowd control, access or area denial, convoy operations, or engaging a lethal threat.

### PROGRAM STATUS

The program is currently in the Engineering, Manufacturing and Development (EMD) phase of the acquisition process, after receiving a favorable Milestone B decision and approval to release the Request for Proposal for an EMD contract in May 2012. The Marine Corps will award a single contract to conduct the EMD Phase. During this phase, the contractor will complete the system design and provide systems (launchers and munitions) to the Government for formal system qualification testing. A Milestone C decision is planned for the first quarter of FY 2015. Based on a favorable MS C decision, a contract option will be awarded to the EMD contractor for the production of the Low-Rate Initial Production quantities for the Initial Operational Test and Evaluation. Operational testing is planned for the first quarter of FY 2015. Initial Operational Capability is planned for fourth quarter of FY 2016 and Full Operational Capability for fourth quarter of FY 2017. The approved acquisition objective is 312 systems.

Procurement Profile: FY 12      FY 13

Quantity:                    0                    0

Developer/Manufacturer: TBD

### OCULAR INTERRUPTION SYSTEM

#### DESCRIPTION



The Ocular Interruption (OI) system will be a permanent replacement for the GLARE MOUT 532P-M and LA-9/P Green Beam Laser Systems that were fielded to Marine Corps units in the U.S. Central Command area of responsibility in response to

an Urgent Universal Need Statement. The OI system will be a weapons-mounted or hand-held dazzling laser employed during Escalation of Force (EoF) situations and will provide a non-lethal, force protection/force application capability to warn and visually suppress targeted personnel at ranges from 10 to 500 meters. The device will use bright light to cause visual field obscuration in targeted individuals and will mitigate the risk of inadvertent lasing through the use of automatic engineering controls. It is intended to be used as a visual warning capability in order to gain the attention of personnel approaching lethal force-authorized zones, with an inherent capability to visually suppress as the range from operator to target decreases.

### OPERATIONAL IMPACT

The OI device will allow personnel engaged in combat, stability and security, and force protection operations to employ an intense visual cueing device to hail and warn personnel and vehicle operators at safe standoff distances. This will provide commanders with a complementary, non-lethal hailing and warning capability in support of their EoF missions and protect Marines against the threat of a vehicle-borne improvised explosive device.

**PROGRAM STATUS**

The program is scheduled to achieve a Milestone C decision in FY 2014. Initial Operational Test and Evaluation is to occur in FY 2014. A total of 1,482 systems will be procured, with Initial Operational Capability scheduled for FY 2015 and Full Operational Capability in FY 2019.

Procurement Profile:	FY 12	FY 13
Quantity:	0	0

Developer/Manufacturer: TBD

**DISABLE POINT TARGET (DPT)**

**DESCRIPTION**

Operational Forces have an immediate requirement for additional capabilities that provide Marines with increased standoff when employing non-lethal (NL) effects. There is a critical need to accurately incapacitate individuals while simultaneously keeping Marines beyond the reach of a hostile threat. Currently fielded individual personnel incapacitation systems require Marines to be in close proximity to the threat. This close range places the Marine at greater risk and compresses the Marine’s decision and response times. The next generation non-lethal un-tethered personnel incapacitation system will permit Marines to acquire targets during both day and night operations at a range greater than 21 feet.

**OPERATIONAL IMPACT**

Operating forces continue to need additional capabilities that increase options along the use of force continuum. The capability to engage and incapacitate point targets with precision accuracy during crowd control/human shield situations or when facing ambiguous threats is critical. The requirement to incapacitate individuals refers to the capability of dissuading or rendering individuals incapable of acting or react-

ing, so that friendly forces may gain control, minimize interference, and/or accomplish a task. The next generation NL Untethered Personnel Incapacitation System will provide this capability at distances greater than current systems. Recent Science and Technology experimentation and research have demonstrated practical, available opportunities in this area. This system will increase the standoff distance between the Marine and a potential threat, allowing more time to determine intent and to escalate force, if necessary.

**PROGRAM STATUS**

An Analysis of Alternatives is being conducted on the Disable Point Target program.

Procurement Profile:	FY 12	FY 13
Quantity:	0	0

Developer/Manufacturer: TBD

**DoD NON-LETHAL WEAPONS PROGRAM**

The Department of Defense (DoD) Non-Lethal Weapons Program stimulates and coordinates non-lethal weapons requirements of the U.S. Armed Services and is the resource sponsor for the development of technologies to satisfy these requirements. The Commandant of the U.S. Marine Corps serves as the DOD Non-Lethal Weapons Executive Agent.

Located at Marine Corps Base Quantico, the Joint Non-Lethal Weapons Directorate serves as the Executive Agent’s day-to-day management office. The U.S. Armed Services work with the Combatant Commanders and the Executive Agent through a joint process to identify requirements and coordinate the planning, programming and funding of non-lethal weapons research, development, and test and evaluation. These efforts directly support the services and U.S. Special Operations Command in their efforts to procure and



field a wide range of non-lethal capabilities. All legal and arms-compliance reviews must be completed before fielding of non-lethal weapons.

In the 15 years since the program's inception, the need for non-lethal weapons, devices and munitions — both counter-personnel and counter-materiel — continues to grow in support of the multitude of DOD missions being conducted around the world. Whether engaged in counterterrorism, stability and reconstruction, or anti-piracy operations, U.S. forces will need to be adept at employing less-than-lethal techniques to complement lethal capabilities and to have the means to satisfy a critical tenet common to counterinsurgency operations: protection of the population.

In recent years, the program has achieved success in fielding programs of record and responding to urgent operational needs. An array of non-lethal weapons, devices, and munitions are available now for conducting checkpoint operations, convoys, area security, patrols, detainee operations, crowd control, maritime operations, and other missions. Today's non-lethal inventory includes acoustic hailing devices, vehicle arresting devices, electric stun guns, vehicle launched grenades, multi-sensory munitions, optical distracters and voice translation devices — all proven technologies that provide reversible effects and applicability across the spectrum of irregular operations.

Non-lethal weapons are explicitly designed and primarily employed to incapacitate personnel or materiel while minimizing fatalities, significant injury to

personnel, and undesired damage to property in the target area or environment. Non-lethal capabilities have matured from the days of riot batons and rubber bullets, but much more needs to be done to increase versatility and further expand the range of non-lethal options available to U.S. forces. Several new or improved capabilities are currently advancing through the development process including the:

- Vehicle Arresting Device
- Improved Acoustic Hailing Device
- 12-Gauge Extended Range Marking Munition
- Mission Payload Module
- Airburst Non-Lethal Munition
- Improved Flash-Bang Grenade
- Green Laser Interdiction System
- Ocular Interruption Device

Additionally, extensive research has been conducted on next generation non-lethal directed energy capabilities that show great promise in providing vehicle stopping, vessel stopping, and area denial applications at extended ranges. The DOD Non-Lethal Weapons Program is committed to supporting the U.S. Armed Services with a wide range of proven non-lethal weapons, munitions and devices to support full spectrum operations in complex environments.

For more information, please visit: <http://jnlwp.defense.gov>.

## SECTION 5: COMMAND AND CONTROL/ SITUATIONAL AWARENESS (C2/SA)



## INTRODUCTION

The Marine Corps Command and Control (C2) Initial Capabilities Document (ICD), approved by the Joint Requirements Oversight Council in February 2008, and the Marine Corps Functional Concept for C2, approved in 2009, incorporate joint integrating concepts and C2 mandates. Together, they articulate our goal of delivering end-to-end, fully integrated, cross-functional capability, including forward-deployed and reach-back functions. They emphasize that C2 must be leader-centric and network-enabled, and that individual Marines must understand their commander's intent and be able to carry out complex operations. The C2 ICD, Functional Concept, and the Marine Corps Information Enterprise strategy described in this section will enable Marine Air Ground Task Force (MAGTF) commanders to exercise effective C2 and bring together all warfighting functions into an effective fighting force. In addition, these programs support the ability of the MAGTFs to function in an integrated naval environment and participate in or lead joint and multinational operations.

## MARINE AIR GROUND TASK FORCE (MAGTF) COMMAND AND CONTROL VISION STATEMENT

MAGTF C2 focuses on the simple premise of getting the right information to the right Marine at the right time in order to make timely and informed decisions. MAGTF C2 is leader-centric, network-enabled and is intended to support the continuous decision making cycle of commanders at every level to ensure they are positioned to best plan, direct, coordinate, and control. Networked C2 capabilities will connect all elements of the MAGTF with joint forces and mission partners to create unparalleled information sharing and collaboration, adaptive organizations, and a greater unity of effort via synchronization and integration of force elements at the lowest levels. Commanders will have the ability to command and control disaggregated forces across great distances to allow Enhanced MAGTF Operations (EMO) down to the company level and below. MAGTF C2 has, at its core, the following ideas:

- Commander/Leader Centric
- Network enabled
- Information Assurance
- Collaborative, shared situational understanding
- Performed by all echelons
- Can be performed anywhere in the operational environment

### MAGTF C2 ROADMAP

The Deputy Commandant of Combat Development and Integration has published the C2 Roadmap for FY 2013 (<https://ehqmc.usmc.mil/org/mccdc/default.aspx>). The MAGTF C2 Roadmap document is capability-based and informs resource and acquisition oversight requirements. This yearly update to the FY12 baseline expands upon the previous annual version and evolves in coordination with other Capability Portfolio Management (CPM) and other elements of HQMC to provide a streamlined foundation for informed de-

cision making. The FY13 edition of the MAGTF C2 Roadmap will address FY13-FY21 proceedings, focusing on the Program Objective Memorandum (POM)-15 investment cycle.

## MARINE CORPS INFORMATION ENTERPRISE (MCIENT) STRATEGY

The Marine Corps Information Enterprise is defined as the Marine Corps information resources, assets, services, and processes required to achieve decision and execution superiority, and to share information and knowledge across the Marine Corps and with mission partners. The MCIENT Strategy prepares the Marine Corps for the future by establishing a vision for the Marine Corps as an *information enterprise* and by providing the objectives necessary for enhancing Service core competencies, defeating adversaries, supporting allies and mission partners, and performing the Marine Corps legislated role.

### VISION

The Marine Corps will continue to meet the challenges of a complex security environment, fight and win the Nation's battles, and endure as the Nation's expeditionary force in readiness. To ensure these imperatives, the Marine Corps must evolve into a *knowledge-based force* that leverages seamless enterprise capabilities across the spectrum of conflict in order to enhance decision making, achieve knowledge superiority, and gain tactical, operational, and strategic advantage over the Nation's adversaries.

### STRATEGY

Achieving the vision requires the development of improved mobile, seamless, and secure communications and IT services across the Marine Corps Information Enterprise. Communications and services with these characteristics facilitate collaboration, coordinated actions, and instant or near real-time access to mission-



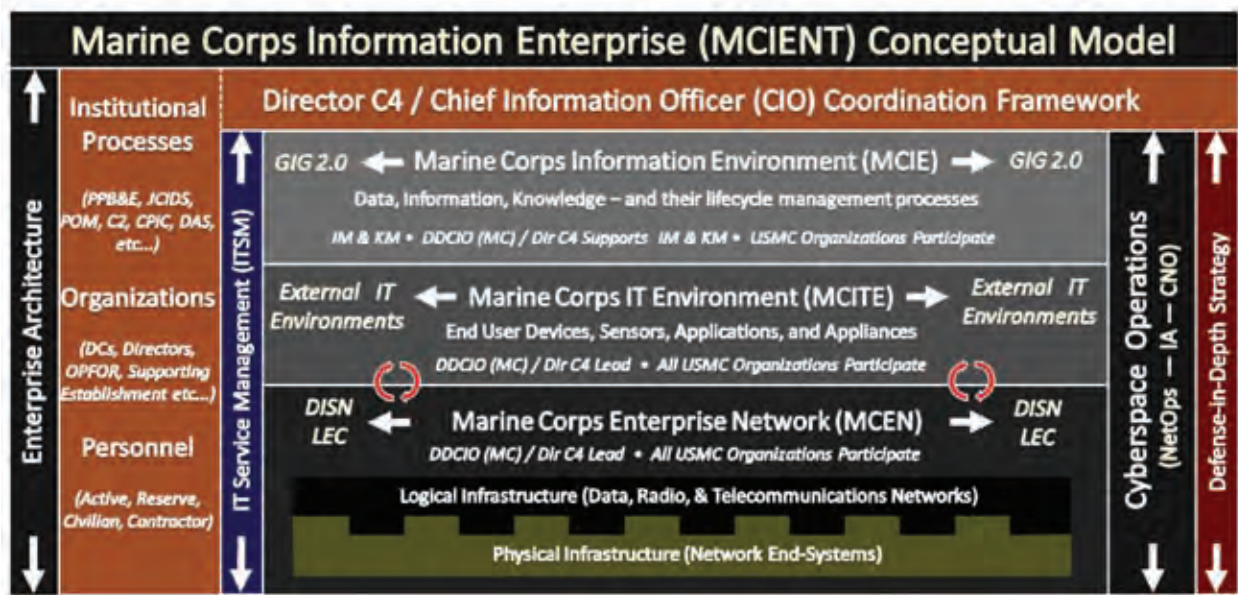


Figure 1. MCIENT Model

critical data, information, and knowledge. To evolve the Corps into a knowledge-based force that achieves decision and execution superiority in traditional warfighting domains, cyberspace, and business mission areas, investments in core MCIENT components are crucial.

Investments for the Marine Corps Enterprise Network (MCEN) and the Marine Corps Information Technology Environment (MCITE) will focus on ensuring their ability to more effectively deliver, display, and manage data, information, and knowledge across the enterprise.

These investments will emphasize better ways for rapidly infusing emerging technologies that enhance command and control, extend the reach of forward-deployed forces, and improve organizational and tactical agility. Investments will be planned from the perspective of ensuring bandwidth-limited Marines and mission partners have improved access to mission-critical data, information, and knowledge, wherever and whenever needed, and in an understandable format. Enterprise investments will also focus on workforce education, training, and professionalization programs. Such initiatives will be designed to ensure Marines, Civilian Marines,

and support contractors know how to use improved enterprise governance tools, policies, and technological capabilities to create advantage in a dynamic strategic landscape.

Finally, the Marine Corps Information Enterprise will embody an institutional sense and practice for leveraging, protecting, and defending data, information, and knowledge as decisive strategic assets. To this end, the Marine Corps will infuse within its cyberspace capabilities an institutionalized Information Assurance (IA) practice for ensuring data, information, and knowledge yield decisive advantage to the Corps and the Nation, and not the enemy.

### CHARACTERISTICS

**Focused on Deployed Forces:** In the future, the location of MAGTF or other USMC forward-deployed forces will vary depending upon the operating context, mission, and the extent to which Marines interact with internal and external organizations and individual mission partners. The Marine Corps will leverage multi-capable MAGTFs with Marines who are trained

to perform a multitude of tasks in varying operational contexts and at differing levels of unit aggregation. MCIENT components will support these Marines by facilitating the development and fielding of mobile, seamless, and secure communications and IT services that provide robust collaboration tools and instant or near real-time access to mission-critical data, information, and knowledge.

**Attuned to the Strategic Environment:** The MCIENT is attuned to the strategic environment by facilitating the development and fielding of tools that help Marines, Civilian Marines, and contractors better assess, adapt to, and influence changes in a dynamic strategic landscape. Attuning the enterprise to the strategic environment requires a special emphasis on leveraging intelligence, including cyber-intelligence, for proactive and reactive mitigation of cyber attacks and threats, and for successful execution across the full spectrum operations.

**Grounded in Effective Governance:** Effective governance implies a mechanism for ensuring that Marine Corps Information Enterprise capabilities are developed and fielded in support of Marine Corps goals and objectives. Figure 1, the MCIENT model provides a framework for integrating common functional requirements, applicable to MCIENT components, into Information Enterprise objectives. The *Marine Corps Information Enterprise Strategy* is thus the mechanism for leveraging the MCIENT model to influence enterprise Force Development priorities. The MCIENT strategy provides the Marine Corps single, top-level Information Enterprise objectives used to inform future capability decisions, supporting plans, concepts, and programming initiatives.

**Secure and Seamless Marine Corps Information Environment:** MCIENT core components enhance the ability for Marines and their mission partners to access the information they need in austere and distributed environments, whenever they need it. The Director C4/Chief Information Officer of the Marine Corps will coordinate with other organizations

to define the implementations required for ensuring information is visible, accessible, discoverable, and understandable in a way consistent with the effective use of constrained bandwidth. Additionally, through programs of record and Marine Corps IT regionalization practices, information will be distributed to deployed forces and staged as far forward as required to ensure availability in a bandwidth-constrained environment. Structured and unstructured data spanning all functional areas will support the distribution, forward staging, and sharing among all command echelons. Finally, creating a secure and seamless Information Environment requires an Enterprise Architecture (EA) that integrates all Marine Corps components who manage segment architectures within the MCIENT (e.g., Battlespace Awareness and Force Application).

**Institutionalized Information Assurance:** Institutionalizing Information Assurance across the Marine Corps means that Marines and systems embody a sense and capability for valuing information as a strategic asset. It requires a total-force approach to ensure that IA skill sets and proficiencies are codified and ingrained through doctrine, policy, education, and training. IA ensures the confidentiality, integrity, availability, authenticity, and non-repudiation of enterprise information and the information system on which the information resides. By continuing to professionalize the IA workforce, the Marine Corps can better leverage enterprise information to help negotiate and succeed in a dynamic security environment. Additionally, the Marine Corps will continue to use existing development processes and continue to refine certification and accreditation processes to ensure IA requirements are identified and included early in a systems design project. Continual refinement and incorporation of emerging policies and guidance from the IA and acquisitions communities will better ensure IA controls are inherent to the system, thus providing superior and transparent threat protection across a wide range of missions.

## MCIENT CORE COMPONENTS

**Marine Corps Enterprise Network:** At the foundation of the MCIENT model shown in Figure 3 is the Marine Corps Enterprise Network. The MCEN is defined as the Marine Corps network-of-networks and approved interconnected network segments, which comprise people, processes, logical and physical infrastructure, architecture, topology, and cyberspace operations.

The MCEN is characterized at a minimum to include: (1) Programs of Record (PORs) that provide network services to forward-deployed forces (e.g., the Support Wide Area Network) operating in the USMC.mil namespace and in USMC-routable Internet Protocol (IP) addresses; and (2) Operations and Maintenance (O&M) functions that provision data transportation, enterprise information technology (IT), network services, and boundary defense (e.g., Marine Corps Enterprise IT Services).

Additionally, the MCEN's physical infrastructure is analogous to the Defense Information System Network (DISN) and the Local Exchange Carrier (LEC), as it enables the Marine Corps Information Technology Environment and the flow of data, information, and knowledge across the Marine Corps Information Environment. The MCEN interfaces with external networks to provide information and resource sharing, as well as access to external services.

Finally, when end-user devices, sensors, applications, and appliances are connected to the MCEN, they become part of the network through a relationship established at an interface point. Interfaces, as indicated by the circular arrows connecting the MCEN and MCITE in the figure, represent an important feature of the model that must be managed effectively to ensure component layer integration. Each MCIENT component layer contributes to the next higher layer by providing services through an approved interface.

**Marine Corps Information Technology Environment:** Figure 3 depicts the MCEN and MCITE as inextricably linked, but distinguishes the MCITE layer

as that encompassing all Marine Corps-owned and -operated IT — including those technologies inherent and not inherent to the MCEN's core operation. Information technologies directly associated with operating the MCEN's logical and physical infrastructure are always considered an inherent part of the MCEN's core operation, and are always considered a permanent portion of the MCITE.

However, information technologies not associated with the MCEN's core operation (e.g., technologies such as Smart Phones, or the Data Distribution System-Modular, and all end systems) are considered ancillary and are therefore only considered a part of the MCEN when they are connected to it through an approved interface. Like inherent MCEN technologies, ancillary technologies are always considered a permanent portion of the MCITE. The circular arrows in Figure 3 indicate the inextricable but often ephemeral link between the MCEN and the MCITE. This distinction and relationship is important to note in order to highlight the intent of the MCITE layer as an encompassing construct around all Marine Corps IT, whether inherent to the MCEN or ancillary to it. This distinction is essential for policy matters and architecture initiatives.

**Marine Corps Information Environment:** The MCIE represents the broad domain for all forms of communication. It comprises Marine Corps data, information, knowledge, and the management processes for ensuring their effective distribution and use across the Marine Corps and with mission partners. The MCIE often leverages, but does not always depend upon, technology and communications systems to facilitate the flow of data, information, and knowledge across the enterprise. Therefore, the MCIE represents a broad domain within which all communication takes place (e.g., explicit and implicit communications). Within the MCIE data, information, and knowledge is shared, situational understanding is achieved, and decisions are made.

## MARINE CORPS ENTERPRISE INFORMATION TECHNOLOGY SERVICES (MCEITS)

### DESCRIPTION

MCEITS is an enterprise information technology capability that delivers value to Marine Corps decision-makers, application owners, information managers, and network users. MCEITS is the enterprise computing and communications capability in the Marine Air-Ground Task Force command and control framework. MCEITS provides enterprise Information Technology services contained within a world-class application and data hosting environment with supporting communications, computing network, information assurance, and enterprise services infrastructure supporting net-centric operations. MCEITS enables Marine Corps Information Technology portfolio consolidation of Information Technology facilities, infrastructure, and services.

The MCEITS service management design contains industry best practices and will utilize Information Technology Infrastructure Library-based principles and methods to provide capabilities to meet operating forces and supporting establishment requirements. The MCEITS System Integration Environment provides Marine Corps application owners and developers with formal application integration and evaluation processes and staging environment. The application inclusion process includes documented, defined, repeatable processes supporting the migration of applications into the operational environment. The MCEITS management effort will provide the documents that contain guidance for the successful management, evaluation and integration of new and modified enterprise services into the MCEITS operations environment.

The MCEITS operations environment provides the common Information Technology infrastructure, allowing the Marine Corps to achieve greater effectiveness and efficiency in the delivery and support of its Information Technology service operations relating to data management, application support, and informa-

tion sharing. MCEITS operations coordinates and carries out proactive and reactive activities supporting all the data, applications, and services in its environment including, utility computing, dedicated server provisioning, capacity utilization, operations scheduling, event and incident monitoring and resolution, problem management, system backup and restoration, and continuity of operations planning.

### OPERATIONAL IMPACT

MCEITS will enable access to Marine Corps enterprise data, information, applications and services. It will also provide a collaborative information-sharing environment across the business and warfighter domains. MCEITS includes an enterprise platform with a common hardware, software, and facilities infrastructure required to support managed hosting services, non-managed hosting services and provisioned hosting services for Marine Corps applications. MCEITS delivers and manages its hosting services at agreed levels as defined by Service Level Agreements to Marine Corps application owners. It provides Marine Corps users with access to the core enterprise services necessary to enable rapid collaboration, efficient discovery, and access to trusted data and information through an enterprise portal framework. It provides users quick access to all hosted applications and core enterprise services by enabling single sign-on capabilities. MCEITS is delivering an agile Information Technology infrastructure that can easily adapt to evolving Marine Corps software, hardware, data, services, and management requirements while providing an enterprise view into the Information Technology environment, facilitating greater reuse of existing Information Technology assets.

### PROGRAM STATUS

MCEITS achieved Milestone C on June 28, 2011 and Initial Operational Capability on July 6, 2011. MCEITS is proceeding with Release 2 to deliver high



availability, disaster recovery and continuity of operations capabilities to achieve Full Operational Capability.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
N/A

## GLOBAL COMBAT SUPPORT SYSTEM- MARINE CORPS (GCSS-MC) DESCRIPTION

GCSS-MC is the Marine Corps web-enabled, deployable logistics information system that provides the backbone for all logistics information exchanges required to effectively request, distribute, and maintain critical battlefield equipment and supplies. The system is being fielded as an Acquisition Category (ACAT IAM) program also known as a Major Automated Information Systems. To achieve this level of designation, a program must exceed \$365 million in research and development funding and procurement funding and be designated as “Special Interest” by Congress. GCSS-MC is designed to initially replace three legacy based systems; Marine Corps Integrated Maintenance Management, Asset Tracking for Logistics and Supply and Supported Activities Supply System. As the primary technology enabler for the Marine Corps Logistics Modernization strategy, the core of GCSS-MC is a modern, commercially available off-the-shelf (COTS) enterprise resource planning software package based on Oracle’s 11i e-Business Suite. With a sizable Business Process Reengineering effort, GCSS-MC enables the warfighter to use GCSS-MC both in garrison and while deployed, providing logistics chain “reach-back” from the battlefield.

## OPERATIONAL IMPACT

Marines in combat require a rapid and flexible logistics capability responsive to the 21st century battlefield. GCSS-MC answers this critical operational imperative. Providing a deployable, single point-of-entry for retail logistics transactions, GCSS-MC introduces cutting edge enabling technology in support of logistics operations, while facilitating modernization of aged logistics processes and procedures. Key to sustaining deployed logistics operations is the GCSS-MC enhancement of asset visibility and supplies accountability. Critical performance objectives include reduced logistics response, reduced customer wait time, and decreased dependence on forward-positioned stocks. Commanders will benefit from GCSS-MC due to increased Logistics Chain intelligence vital to effective command and control functions. Supply, Maintenance, and Distribution Marines will experience increased efficiency in planning, accountability and expedited delivery of supplies and equipment to supported units. GCSS-MC Increment 1 contains two distinct releases and will ride on the existing Marine Corps Tactical Data network. Release 1.1 provides for basic Supply, Maintenance, and Asset Tracking functionalities, while Release 1.2 centers on the system’s ability to operate in an expeditionary logistics environment in support of the Marine Air Ground Task Force by providing a cross-domain solution (i.e., unclassified and classified exchange of information) and data synchronization (e.g., continued operation in a disconnected environment) for deployed units. GCSS-MC is tied to GCSS-Joint within the GCSS Family of Systems to enable a Department of Defense system of record enabling joint logistics command and control.

## PROGRAM STATUS

**Increment 1:** Release 1.1 has been fully implemented in the III Marine Expeditionary Force Area of Operations, which includes Okinawa, mainland Japan, and Hawaii. Release 1.1 Total Force Implementation to

all operational units, bases and stations in the Continental United States began in September of 2011, and was completed in late 2012. Development of the deployable Release 1.2 capability is ongoing, with fielding expected to begin during 2013.

Metrics collection is a strong component of GCSS-MC. Initial operations in Okinawa indicates significant improvements in Order Ship Time, Repair Cycle Time, and Time to First Status. The full impact of these logistics enhancements will take time to assess and interpret although initial data indicates positive results.

**Increment II/Future Increments:** Current projections include an essential major Oracle COTS software upgrade to the e-business suite. Key system enhancements for Asset Logistics Management also include enhanced wholesale functionality, such as Warehouse Management solutions, Item Unique Identification, and other force multiplier capabilities to processes and reporting. Other improvements may include In-Transit Visibility and Standard Financial Information Structure accounting, along with continuous process improvements to Supply Chain Management and data warehousing capabilities.

**Post Deployment System Support Program (PDSS):** PDSS supports GCSS-MC fielding by providing all necessary maintenance and sustainment activities for systems in production/sustainment, and the remaining systems as they migrate from development into sustainment. These activities include support of the GCSS-MC PDSS Model which is based on implementing Information Technology Service Management within the Information Technology Infrastructure.

**Developer/Manufacturer:**

Oracle USA, Inc, Redwood Shores, CA

## COMPOSITE TRACKING NETWORK (CTN)

### DESCRIPTION

CTN is the adaptation of the U.S. Navy Cooperative Engagement Capability (CEC) to satisfy Marine Corps expeditionary maneuver warfare requirements. The network will provide Marine Corps aviation command and control (C2) agencies the ability to distribute composite tracking and fire control data to Marine Corps and Navy C2 and weapons systems. CTN is an essential element in the Marine Corps future Command, Control, Communications, Computers and Intelligence architecture.

### OPERATIONAL IMPACT

CTN will provide the Marine Air-Ground Task Force (MAGTF) commander a sensor-netting solution that will help defend friendly forces from aircraft and cruise missiles. Near real-time correlation of local and remote sensor data, via the CEC/CTN network, will provide the MAGTF commander precise and accurate target-quality track data and will improve situational awareness and battlespace coverage.

### PROGRAM STATUS

CTN has completed AN/TPS-59 Long-Range Radar interface development. The software interface development for Aviation C2 and Ground/Aviation Task Oriented Radar (G/ATOR) are underway. Milestone C was achieved in the first quarter of FY 2009, and the software began Low Rate Initial Production in early 2010. Initial Operational Capability was achieved March 2011. The Approved Acquisition Objective is 25 systems — ten initial procurement and the remaining 15 dependent upon funding and required manpower adjustments.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

**Developer/Manufacturer:**

Naval Surface Warfare Center, Crane Division, Crane, IN

## JOINT BATTLE COMMAND- PLATFORM (JBC-P) FAMILY OF SYSTEMS

### DESCRIPTION

JBC-P Family of Systems (FoS) is the Marine Corps primary battlefield Command and Control (C2) system. It provides tactical input and output of battlefield digitized position location information and Situational Awareness (SA) at the company, squad, and vehicle levels. It enables enhanced combat effectiveness of friendly forces. It populates the common tactical picture and supports development of the common operational picture. JBC-P FoS supports the full range of military operations. JBC-P is Increment II of the Force XXI Battle Command Brigade and Below program. JBC-P builds on the experience of evolutionary development of digital battle command information systems and provides integrated, on-the-move, timely, relevant C2/SA information to tactical combat, combat support and combat service support commanders, leaders, and key C2 nodes. JBC-P FoS provides mounted, dismounted, and command post C2/SA capability and will become the cornerstone of the Joint Blue Force Situational Awareness envisioned to support the joint warfighter.

### OPERATIONAL IMPACT

JBC-P FoS provides the Marine squad leader, platoon commander, and company commander the ability to send and receive updated tactical information, changes to their respective operating environment, and minute-to-minute changes in location of friendly forces and other units within their immediate and extended battlespace.

### PROGRAM STATUS

JBC-P FoS Increment II is scheduled for Operational Test in FY 2013. Fielding will begin in FY 2014.

Procurement Profile:	FY 13	FY 14
Quantity:	0	1,354*

\* Procurement information is for Dismounted Initiative 1 only

### Developer/Manufacturer:

JBC-P is an Army-led partnership of the U.S. Army, Marine Corps, and the Software Engineering Directorate in Huntsville, AL.

## NETWORKING ON-THE-MOVE (NOTM) INCREMENT 1

### DESCRIPTION

NOTM Increment 1 is a transformational Command and Control (C2) capability for all elements of the Marine Air Ground Task Force (MAGTF). Increment 1 specifically targets urgent U.S. Central Command requirements but the program is envisioned to address broader requirements in an incremental approach. Leveraging expertise and lessons learned from developing Mobile Modular Command and Control systems operating in *Operation Enduring Freedom* since 2009, Increment 1 is an Urgent Statement of Need based rapid acquisition and fielding program providing robust C2 On-The-Move through wideband Satellite Communications and terrestrial data links. Consisting of four subsystems, Point of Presence Vehicle Kit (POP-VK) (A03877G), Staff Vehicle Kit (SV Kit) (A03887G), Staff Kit (SK) (A04057G), and TEP Modem Kit (TMK) (A03957G), NOTM Increment 1 provides three network enclaves, Secret Internet Protocol Router, Unclassified but Sensitive Internet Protocol Router and Mission Specific while incorporating Full Motion Video, Voice Over Internet Protocol, and other network centric capabilities all integrated on standard USMC tactical vehicles. SV Kits and SK utilize ruggedized laptops with a full suite of Joint Common Tactical Workstation software accessing the Common Tactical Picture and other C2 facilitating applications from the POP-VK to the rear command operations center.

### OPERATIONAL IMPACT

NOTM Increment 1 enables commanders to better exercise C2 while OTM and Beyond Line of Site and provides transmission paths that enable mobile forces,

across the MAGTF to collaborate, access information, and to exchange voice, video, and data in a dynamic environment while OTM and at the halt.

### PROGRAM STATUS

IOC: March 2013

FOC: August 2014

Procurement Profile:	FY 13	FY 14
Quantity:		
POP-VK	43	16
SV Kit	85	32
SK	170	6
TMK	4	5

Developer/Manufacturer:

Space and Naval Warfare Systems Command (SPAWAR)

Pelatron Inc. Honolulu, HI

### TACTICAL NETWORKING SYSTEMS DESCRIPTION

Tactical Networking Systems is a portfolio of core baseband networking hardware and software configured as a family of services that facilitates end-user services requirements of multiple security enclaves for Marine Air-Ground Task Force (MAGTF) tactical communications networks. The portfolio comprises the Joint Enhanced Core Communications System (JECCS); the Tactical Data Network (TDN), which includes the Data Distribution System-Modular (DDS-M) Core, and Expansion modules; the Digital Technical Control (DTC); and the Transition Switch Module (TSM).

JECCS is the joint task force (JTF) enabler, a “first-in” integrated, processor-controlled communications and management system that provides Command and Control (C2) capabilities supporting a Marine Expeditionary Unit (MEU) deployment ashore or the early phases of a deployment by a larger command element,

such as a MAGTF or JTF commander’s mission into an area of operations. It provides the primary interface between subscriber equipment and the long haul multi-channel transmission systems. JECCS facilitates secure and non-secure voice and data communications, switching functions, network routing, and management functions. JECCS multiplexes Marine Corps Tri-Band satellite systems, Tropospheric Scatter Microwave Radio Terminal (AN/TRC-170), and Digital Wideband Transmission System (AN/MRC-142) into an integrated network. This integration enables access to Defense Information Services Network (DISN) telecommunication services, wide and local area networks, Secret Internet Protocol Router Network (SIPRNet), and Sensitive but Unclassified Internet Protocol Router Network (NIPRNet) networks and physical network management services, messaging services, International Maritime Satellite, Global Broadcast System (GBS), and Ultra High Frequency-Tactical Satellite (UHF-TACSAT) capabilities.

TDN DDS-M provides an Internet Protocol (IP)-based data networking capability for communications support to organizations organic to a MAGTF. The transit-cased DDS-M provides an extension of the DISN, SIPRNet, and NIPRNet, as well as a coalition networking capability. It provides the backbone tactical data communications infrastructure to the MAGTF commander in the form of an integrated data network providing the capability to access a single data network enclave, authenticate users and equipment, send and receive electronic mail, share and store files, directory services, disaster recovery/ COOP, perform required information assurance functions, Integrated Services Digital Network, transparent routing and switching of digital messages between the LAN, circuit switch, and EPLRS sub networks. The DDS-M provides Marine Corps maneuver elements with a flexible, survivable, scalable, and modular IP data transport capability that enables access to strategic, supporting establishment, joint, and other service tactical data networks.

DTC provides a deployable technical control func-



tion for the MAGTF commander. The DTC performs control and management functions over expanding digital communications systems, integrating the communications assets of a node into an efficient system that provides the MAGTF commander with seamless communications while making efficient use of limited bandwidth and equipment. The DTC is the central management facility, terminating all terrestrial links and switch circuits for major commands. Data circuits and miscellaneous subscriber circuits are interconnected, as required. The DTC consists of an S-280 shelter that is modified to accommodate commercial off-the-shelf (COTS), government off-the-shelf, and non-developmental item technical control and ancillary equipment.

TSM provides a flexible unit level switch that replaced legacy TRI-TAC switches (SB-3614, SB-3865, AN/TTC-42) with more robust voice and data switching, data transport, and bandwidth management capabilities. The TSM consists of three functional suites of equipment mounted in transit cases: (1) the Deployable End Office Suite (DEOS); (2) the Remote Subscriber Access Module (RSAM); and (3) the Deployable Integrated Transport System (DITS). TSM maintains USMC joint interoperability as the other services transition to COTS switching technologies. The modular design of the TSM provides the capability to add or delete equipment without adversely affecting existing communications architectures. A further emerging requirement is to incorporate a Voice over Internet Protocol (VoIP) capability.

### OPERATIONAL IMPACT

JECCS meets the Joint Task Force Enabler (JTFE) mission requirements with a “first-in” backbone connectivity capability that accesses the Defense Information Network Standard Tactical Entry Point, Nonsecure Internet Protocol/Secret Internet Protocol Router Network, Video Teleconference, and Defense Switch Network. JECCS augments both current and some planned communications architectures and provides

technical control and network management services for a broad range of switching and radio connectivity requirements.

TDN DDS-M provides its subscribers with basic data transfer and switching services; access to strategic, supporting establishment, joint, and other service component tactical data networks; network management capabilities; and value-added services such as message handling, directory services, file sharing, and terminal emulation support. It will provide IP connectivity for tactical data systems and the Defense Message System.

DTC provides the resources for the technical controller to exercise effective operational control over the communications links, trunks, and groups within a deployed Marine Corps network. DTC is located at the Marine Force Component, Marine Expeditionary Forces (MEFs), and Major Subordinate Command (MSC) HQ C2 nodes. Within a MAGTF node, the DTC can connect to multiple transmission systems such as satellite systems, multi-channel systems, single channel radio systems, and cable. From the MEF user’s perspective, the DTC provides the multiplexing and link management of four general categories of information. The DTC manages voice/circuit switches, data switches, and dedicated circuits.

TSM is employed at all levels of the MAGTF to effect voice and limited data switching capability. The modular design allows units to implement the system according to the mission needs. The equipment is operated and maintained by MSC, Marine Expeditionary Unit, Marine Expeditionary Brigade, and MEF communications personnel. The number of TSM packages deployed to a theater will be commensurate with the size of the operation/contingency. The TSM equipment has been fielded to all levels of the MAGTF.

### PROGRAM STATUS

Initial Operational Capability (IOC) for Core Module Suites was completed in 2012. Full Operational Capability (FOC) for Core Module Suites is expected to take place in fourth quarter of FY 2013. IOC for

Expansion Modules is scheduled for the second quarter of FY 2014 with FOC occurring in second quarter of FY 2015.

JECCS underwent an IA upgrade during FY 2012 to ensure compliance with IA requirements. A series of Engineering Change Proposals (ECPs) are planned during FY 2013 – FY 2015 to preclude any obsolescence, interoperability, and information assurance issues.

DTC has undergone a system refresh, and IOC was achieved in 2012. FOC is expected to take place by the third quarter of FY 2013.

TSM is in sustainment with replacement of obsolete components being conducted through ongoing ECPs. Initial development of a VoIP capability is expected to begin during FY 2013. A comprehensive review of the Authorized Acquisition Objective for TSM will be concluded during FY 2013. This review is expected to reduce quantities for DEOS and RSAM.

Procurement Profile:	FY 13	FY 14
Quantity:		
DDS-M	477	0
JECCS	14	0
TSM-DEOS	221	0
RSAM	855	0
DITS	128	0

Developer/Manufacturer:

DDS-M: General Dynamics C4 Systems, Taunton, MA

JECCS: SPAWAR, Charleston, SC

DTC and TSM: SPAWAR, Charleston, SC

## TACTICAL COMMUNICATION MODERNIZATION (TCM)

### DESCRIPTION

TCM is a family of radio systems that bridges the gap between legacy systems — non-networking, non-communication security (COMSEC) modernization compliant — and forecasts delivery of advanced systems that operate Joint Networking Waveforms such as Soldier Radio Waveform, Wideband Networking Waveform, and Mobile User Objective System (MUOS). TCM addresses the requirement to enhance, improve, upgrade, and sustain tactical radios while achieving interoperability and minimizing the effects of equipment obsolescence. TCM procurements support National Security Agency COMSEC modernization requirements that must be compliant no later than 2024. This entails replacing thousands of Multi-Band Radio (MBR) systems and High Frequency (HF) systems such as the AN/PRC-117F and AN/PRC-150.

### OPERATIONAL IMPACT

TCM provides the primary means of secure voice and data networked communications for mounted and dismounted forces. It also provides push-to-talk and networked radios that operate across multiple frequency bands and modes of operation. TCM enables Command and Control and Situational Awareness for all elements of the Marine Air Ground Task Force and networked data communication down to the squad/team level.

### PROGRAM STATUS

The TCM line consists of multiple radios at various levels of development, procurement and sustainment. Currently in the sustainment phase are: high frequency radios; (AN/PRC-150, AN/VRC-104, AN/TRC-209 and AN/MRC-148), MBRs; (AN/PRC-117F and AN/VRC-103); Tactical Handheld Radios (THHRs); (AN/PRC-148(V)2/3, AN/PRC-152, and AN/VRC-110/112/113), as well as the Integrated Intra-Squad Radios (IISR).

Legacy systems, such as Enhanced Position Locating and Reporting System, will not be supporter after 2016. Radios in the procurement phase include: the MBR II; (AN/VRC-117G, AN/VRC-114(V)1, and AN/MRC-145B), Wideband THHR; and MUOS. Planning for the follow-on generation of IISR and HF radios to address lifecycle and COMSEC modernization compliance is underway.

Procurement Profile:	FY 13	FY 14
Quantity:		
MBR II	385	367
MUOS	N/A	TBD

Developer/Manufacturer:  
Harris- Melbourne, FL  
Thales- Clarksburg, MD  
Motorola- Schaumburg, IL  
Raytheon- Waltham, MA

## TACTICAL DATA NETWORK (TDN) DATA DISTRIBUTION SYSTEM- MODULAR (DDS-M)

### DESCRIPTION

The TDN DDS-M provides the tactical Unclassified but Sensitive Internet Protocol Router, Secret Internet Protocol Router, and Coalition Network backbone data communications infrastructure to the Marine Air Ground Task Force (MAGTF). DDS-M allows users to access to web surfing, send and receive e-mail, file sharing/storage, perform required Information Assurance functions, and to host mission-essential applications. DDS-M provides firewalls, servers and data infrastructure components that allow tactical and deployed USMC forces to connect to the Defense Information Systems Agency and Theater and USMC Enterprise Networks. Programs such as Combat Operations Center, Common Aviation Command and Control System, and Common Logistics Command and Control System utilize DDS-M for world-wide connectiv-

ity. DDS-M is comprised of both core and expansion modules. Core modules include the Configuration Module (CM), Communications Switch Module, LAN Services Module, LAN Extension Module, Application Server Module and Data Storage Module. Expansion modules include the WAN Service Module (WSM), Multimedia Control Module, Multimedia Distribution Module, Enterprise Switch Module (ESM), Deployed Information Assurance Tools Suite, and Information Assurance Module (IAM).

### OPERATIONAL IMPACT

TDN DDS-M provides extension of the Marine Corps Enterprise Network via the Global Information Grid to forward deployed forces – i.e. the last tactical mile. The modular packaging of the DDS-M provides a ‘take what the mission needs’ employment concept within the MAGTF.

### PROGRAM STATUS

Core Module Suites:

IOC: 4Q FY12

FOC: 4Q FY13

Expansion Modules:

IOC: 2Q FY14

FOC: 2Q FY15

Procurement Profile:	FY 13	FY 14
Quantity:		
Core Module Suites:	477	0
Expansion Modules:		
WSM(V)1	0	49
WSM(V)2	0	880
ESM	0	62
Power Module	0	111
IAM	0	148
CM	0	148

Developer/Manufacturer:  
General Dynamics- West Falls Church, VA

## GROUND-BASED AIR DEFENSE TRANSFORMATION (GBAD-T)

### DESCRIPTION

GBAD-T is the Marine Corps only organic ground-based air defense capability. GBAD-T uses the High-Mobility Multipurpose Wheeled Vehicle (HMMWV)-based Advanced Man-Portable Air Defense System (A-MANPADS) and the Stinger missile to defeat both fixed- and rotary-wing threats.

### OPERATIONAL IMPACT

Employing A-MANPADS and the Stinger missile, the Low-Altitude Air Defense (LAAD) Battalions provide the MAGTF low-altitude, short-range air defense asset against enemy air threats. LAAD battalion detachments deploy with Marine Expeditionary Units (MEUs) as part of the Marine Air Control Group detachment.

The A-MANPADS Increment I program enhances the legacy systems' command and control suite. The hardware and software upgrade provides an enhanced fire-control and air/ground situational-awareness capability to the LAAD Battalions. Increment I uses Joint Range Extension Application Protocol, a joint-certified data link, ensuring compatibility with legacy and future C2 architectures. Increment I radios are satellite-communications capable.

### PROGRAM STATUS

In May 2009, the Marine Requirements Oversight Council approved the GBAD Initial Capabilities Document (ICD) that validated existing capability gaps against low-observable/low-radar cross-section threats. The GBAD Analysis of Alternatives identified candidate material solutions for the Stinger missile replacement that fill the gaps identified in the GBAD ICD. The Marine Corps will execute a service life extension program of the Stinger missile to maintain a GBAD capability as a bridge to a to-be-determined weapons system to be programmed for Program Objective Memoranda

(POMs) 2015 and 2016. The future weapon system is envisioned to provide continuous, on-the-move, low-altitude air defense for the Marine Air Ground Task Force (MAGTF). The program will examine future capabilities, such as an integrated multi-mission turret with a gun, missiles, and directed-energy weapons, which support future material and technology solutions and the joint on-the-move engagement sequence.

Procurement Profile:	FY 13	FY 14
Quantity:		
Section Lead		
Vehicles	10	3
Fire Unit Vehicles	41	9

Developer/Manufacturer:  
Naval Surface Warfare Center Crane  
Division, Crane, IN

## AN/TPS-59A(V)3 RADAR SYSTEM

### DESCRIPTION

The AN/TPS-59 was fielded in 1985 and is the only Marine Air Ground Task Force (MAGTF) long-range, three-dimensional, air surveillance, theater ballistic missile defense (TBMD)-capable radar. The AN/TPS-59A(V)3 a is transportable, solid-state L-band radar that serves as the MAGTF's principal air-surveillance radar and is integrated into the TYQ-23(V)4 Tactical Air Operations Module. The radar may also be configured for operation with the MSQ-124 Air Defense Communication Platform to provide TBM track data to the Joint Tactical Information Distribution System via the Tactical Digital Information Link-Joint Service Link-16 network.

The TPS-59(V)3 is a component in the Navy's Cooperative Engagement Capability in the littoral environment and is the Marine Corps lead sensor in the Composite Tracking Network.



### OPERATIONAL IMPACT

The AN/TPS-59A(V)3 radar system is optimized to detect and track TBMs and air-breathing aircraft targets that constitute threats to MAGTF operations. Marine Air Control Squadrons employ the radar during sustained operations ashore and as part of the joint theater integrated air and missile defense architecture. The radar system supports the MAGTF commander in anti-air warfare operations and en-route traffic control to a distance of 300 nautical miles and TBM surveillance to 400 nautical miles. The radar system is deployed to *Operation Enduring Freedom* and in direct support of MAGTF operations.

### PROGRAM STATUS

The AN/TPS-59A(V)3 Radar System is in the operations and support phase. In order to maintain the radar to 2025, an incremental sustainment strategy of engineering change proposals and technical refresh efforts will address diminishing manufacturing sources, material shortages, and obsolescence issues. Additionally, per Department of Defense mandate, a Mode 5 Identification Friend or Foe capability will be incorporated into the AN/TPS-59A(V)3 in the FY 2014 to FY 2015 timeframe.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:  
Lockheed Martin Mission Systems and Sensors,  
Syracuse, NY

### IDENTITY DOMINANCE SYSTEM (IDS)

#### DESCRIPTION

The requirement for an enduring Marine Corps biometric capability originated from urgent warfighter requests to support counter-insurgency operations in Iraq and Afghanistan. The Biometric Automated Toolset (BAT) is a fielded, commercial-off-the-shelf item that is fulfilling that immediate need. The Identity Dominance System (IDS) will replace BAT with improvements such as increased data storage and longer battery life.

The IDS will be a multimodal biometric system that collects and compares unique, individual biometric characteristics to enroll, identify, and track persons of interest and build digital dossiers on the individuals for purposes that include anti-terrorism/force protection, local employee screening, detention management, civil affairs, base access, humanitarian assistance, population control, counter intelligence, and high-value target identification. The IDS is designed as a three-tiered system with hardware and software including a server suite capability, a client suite capability, and a family of handheld capabilities.

#### OPERATIONAL IMPACT

The primary mission of the IDS is to provide the Marine Air Ground Task Force (MAGTF) and other Department of Defense (DOD) forces with the means to identify persons encountered in the battlespace. The capability requires the MAGTF commander be able to collect, match, store, and share biometric data. The IDS will enable Marines to collect biometric, biographical, and reference information on an individual and match this locally developed information with pre-existing information available to the expeditionary force.

#### PROGRAM STATUS

In August 2012, a Marine Corps Systems Command Acquisition Decision Memorandum designated the IDS as an Abbreviated Acquisition Program and

the Program Decision Authority to Program Manager, Marine Air Ground Task Force Command, Control and Communications. The Marine Corps intends to be a customer of the larger DOD Biometrics program but will maintain an interim capability until the joint solution is available. The Army schedule for the joint solution shows and Initial Operational Capability for IDS-Marine Corps in FY 2019.

Developer/Manufacturer: TBD

## COUNTER RADIO-CONTROLLED IMPROVISED EXPLOSIVE DEVICE (RCIED) ELECTRONIC WARFARE (CREW)

### DESCRIPTION

The RCIED CREW systems are vehicle-mounted and man-portable backpack active/reactive electronic countermeasure systems designed to counter high and low-powered radio controlled IEDs.

### OPERATIONAL IMPACT

The Marine Corps CREW program provides Marines with an effective electronic warfare capability to counter the threat posed by RCIEDs and to improve force protection. The CREW Vehicle Receiver/Jammer (CVRJ) is the primary vehicle-mounted jammer, while the Thor III dismounted system is the in-service man-portable system. Thor III provides coverage and protection from RCIEDs when Marines are dismounted and operating outside the protective envelope of mounted CREW systems.

### PROGRAM STATUS

The Marine Corps CREW program was designated as an Acquisition Category II program in February 2007 and achieved a full rate production decision in March 2007. The CREW program initially acquired a total of 10,089 Chameleon and Hunter systems. This initial capability evolved into CREW 2.1, the CVRJ. The December 2008 approval of the Joint CREW 3.3 Capabilities Development Document and February 2009 approval of the CREW Program Office Acquisition Strategy/Acquisition Plan led to the procurement of up to 8,000 CVRJ. CVRJ and THOR III legacy systems will be maintained and sustained to meet the operational requirements of the Combatant Commands.

Planned Approved Acquisition Objective for the enduring CREW requirement is 2,410 total systems: 1845 Mounted and 565 Dismounted systems.

Procurement Profile:	FY 13	FY 14
Quantity:	0	0

Developer/Manufacturer:

CVRJ: International Telephone and Telegraph (ITT), White Plains, NY

Chameleon: General Dynamics, Falls Church, VA

Thor III: Sierra Nevada Corporation, Sparks, NV



## **SECTION 6: INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE**





## DISTRIBUTED COMMON GROUND SYSTEM-MARINE CORPS (DCGS-MC) ENTERPRISE

DCGS-MC, in compliance with the Department of Defense (DOD) DCGS Family of Systems concept and policies, is a service-level effort to migrate select Marine Corps intelligence, surveillance, and reconnaissance (ISR) capabilities into a single, integrated, net-centric baseline. As part of the processing, exploitation, analysis, and production component of the Marine Corps ISR Enterprise, DCGS-MC will comprise functional capability sets that support Marine intelligence analysts across the Marine Air Ground Task Force (MAGTF) and supporting establishment by making organic and external all-source ISR data more visible, accessible, and understandable. The DCGS Integration Backbone provides foundational interoperability among the Services' DCGS programs.

### OPERATIONAL IMPACT

DCGS-MC will migrate selected legacy ISR processing, exploitation, analysis, and production capabilities, resulting in increased unit-level and enterprise-level capacity for ingesting sensor data, streamlined production of intelligence information, and enhanced management of finished intelligence products.

### PROGRAM STATUS

The DCGS-MC program Increment 1 achieved Milestone B during the fourth quarter of FY 2011 and was granted authority to enter into the Engineering and Manufacturing Development Phase. DCGS-MC will continue to leverage the developmental efforts of other services' DCGS programs. The program acquisition strategy is based on incremental development optimized to rapidly introduce government and commercial technologies, enterprise standards, and modular hardware components in order to minimize costs and reduce program risk. The program subsumed the Tactical Exploitation Group and Topographic Production Capability programs during FY 2010 as part of the

Increment I development. The DCGS-MC Capability Development Document (CDD) is anticipated to be approved for conversion to an Information Systems CDD by the joint staff during second quarter FY 2013. Approval of this updated requirements document will enable DCGS-MC to more rapidly and efficiently integrate and field emerging technologies.

Procurement Profile:	FY 13	FY 14
Quantity:	0	25

### Developer/Manufacturer:

The Space and Naval Warfare Systems Command Systems Center Atlantic (SSC LANT) is the lead systems integrator.

## INTELLIGENCE ANALYSIS SYSTEM (IAS) FAMILY OF SYSTEMS (FOS)

### DESCRIPTION

IAS FoS provides the all-source analysis capabilities within the Distributed Common Ground System – Marine Corps Enterprise. It uses a three-tiered approach for receiving, parsing, and analyzing information from multiple sources to fuse and disseminate all-source intelligence products and threat warnings. Tier I, the Marine Expeditionary Force (MEF) IAS, is a mobile system that supports the MEF Command Element. Tier II is the Intelligence Operations Server that supports intelligence operations at the major subordinate commands within the Divisions, Regiments, Wings, and Groups. Tier III is the Intelligence Operations Workstation that supports intelligence operations at the battalion, squadron, and company levels using client/server and web-based technology to network with intelligence sections and units at higher echelons. The IW can also function as a stand-alone workstation in a disconnected or degraded communication environment.

**OPERATIONAL IMPACT**

Fielding of IAS FoS has provided Marine Air Ground Task Force commanders with a mobile, all-source, intelligence data analysis, fusion and dissemination capability as well as access to time-sensitive intelligence information that is crucial to the military decision-making process and battlespace awareness.

**PROGRAM STATUS**

The IAS FoS is in the operations and support phase of the acquisition process. All systems are fielded to the operating forces and Marine Reserve units. IAS FoS executes periodic hardware, software, and peripheral upgrades.

Procurement Profile:	FY 13	FY 14
Quantity:		
Tier I	10	0
Tier II	0	1,717

Developer/Manufacturer:  
Space and Naval Warfare Systems Center, Charleston, SC is the lead systems integrator.

**TECHNICAL CONTROL AND ANALYSIS CENTER (TCAC)**

**DESCRIPTION**

TCAC is the Marine Corps primary signals intelligence (SIGINT) analysis system. TCAC satisfies the Marine Corps requirement for a semi-automated tactical SIGINT and Electronic Warfare (EW) fusion system that can perform the processing, analysis, and reporting functions of the Radio Battalions (RadBn), Marine Special Operations Intelligence Battalion, and Marine Tactical Electronic Warfare Squadrons (VMAQ). TCAC fuses signals intelligence data from organic, theater, and national collection platforms and is the focal point of the RadBn SIGINT operations. TCAC deliv-

ers an enhanced automated intelligence processing, analyzing, and reporting capability that improves the total control and management of SIGINT and EW capabilities, including the production and dissemination of SIGINT/EW information for the Marine Air Ground Task Force (MAGTF).

**OPERATIONAL IMPACT**

TCAC is the primary system that enables SIGINT Marines to provide planning support and timely and accurate, fused signals intelligence to the MAGTF. TCAC is deployed in support of MAGTF operations worldwide in two configurations: the TCAC Remote Analysis Workstation (RAWS) and the Transportable Workstation.

**PROGRAM STATUS**

TCAC is a fully fielded, post-Milestone C program that is undergoing incremental upgrades to improve current capabilities. Major enhancements include a Windows Server upgrade, Full Disk Encryption, a fully integrated audio processing capability, a Semantic Wiki with user-defined alerts, Digital Network Intelligence analysis capability, and integration with the Real Time Regional Gateway.

Procurement Profile:	FY 13	FY 14
Quantity:		
TCAC RAWS	15	0
Transportable Workstation	500	0

Developer/Manufacturer:  
Space and Naval Warfare Systems Center, San Diego, CA is the lead systems integrator.

## SENSITIVE COMPARTMENTED INFORMATION COMMUNICATIONS (SCI COMMS)

### DESCRIPTION

SCI Comms is the former Trojan Special Purpose Integrated Remote Intelligence Terminal (Trojan SPIRIT) program and focuses on meeting broad-ranging intelligence communications requirements. SCI Comms is a portfolio consisting of several high-bandwidth communications systems, including man-portable, palletized, and trailer-mounted variants. Each system provides a unique, mission-specific capability. However, all systems provide the Marine Air-Ground Task Force (MAGTF) commander a near real-time means to move perishable data for the production of timely, actionable intelligence.

### OPERATIONAL IMPACT

SCI Comms provides MAGTF commanders short- and long-haul, deployable and secure communication capabilities using existing networks and access providers (examples include the Defense Intelligence Activity, the Defense Information Systems Agency, or the U.S. Army Intelligence and Security Command). SCI communications are deployed in support of MAGTF intelligence units worldwide and provide dedicated, mission critical intelligence communications.

### PROGRAM STATUS

SCI Comms approved acquisition objective is 32 palletized systems, 20 mobile systems and 18 Team terminals.

#### Developer/Manufacturer:

Trojan SPIRIT LITE (V)1: U.S. Army Communications Electronics Command (CECOM) Intelligence and Information Warfare Directorate (I2WD) – now part of U.S. Army Research, Development and Engineering Command (Provisional), Fort Monmouth, N.J. -- is the material developer for the TROJAN family, including TROJAN SPIRIT II and TROJAN SPIRIT LITE. The combat developer is

the U.S. Army Intelligence Center & Fort Huachuca, Ariz., with the U.S. Army Intelligence and Security Command, TROJAN Management Office, serving as executive agent for the system. The system is fabricated and integrated by CECOM I2WD with the largest subcontractor being Global SATCOM Technologies, Gaithersburg, Md. for the satellite communications subsystem.

High Band Special Intelligence Mobile Terminal (HBSI-MT): PM WIN-T, Aberdeen, Maryland (Contracting Office), HBSI-MT fabricated and integrated by General Dynamics, Duluth, GA.

HBSI Team Terminal: DJC2 Program Office, Pensacola, FL; SWE-DISH: Rockwell Collins, Duluth, GA

## COUNTER-INTELLIGENCE AND HUMAN INTELLIGENCE EQUIPMENT PROGRAM (CIHEP)

### DESCRIPTION

CIHEP supports the full spectrum of counter-intelligence (CI) and human intelligence (HUMINT) operations with imagery, commercial satellite communications, auxiliary power, automated data processing, and sensitive technical support equipment. All equipment is stored and transported in lightweight, modular, and deployable cases to facilitate task organization of equipment for assigned missions. The standardized CIHEP software baseline provides reporting, analysis, communications, mapping, still and video image processing, and Common Operational Picture applications.

### OPERATIONAL IMPACT

CIHEP enhances the Counterintelligence HUMINT Detachment (CHT) ability to conduct HUMINT and CI operations in support of Marine Air Ground Task Force missions at the tactical, operational, and service levels. The equipment suite provides CHTs with an organic capability to research collection requirements, process collected information,

produce intelligence reports, and disseminate those reports securely to supported commanders and the Intelligence Community. The equipment also provides limited organic technical support to CI and HUMINT operations.

**PROGRAM STATUS**

In fourth quarter of FY 2012, CIHEP was successfully granted a full rate production determination by the milestone decision authority to proceed with the CIHEP Modification to Systems (Mods). CIHEP Mods includes a surveillance communication, media exploitation, and technical support capability. CIHEP is scheduled to return to the milestone decision authority to request a fielding decision by third quarter FY 2013. The existing components within CIHEP are in sustainment, and selected components are refreshed annually.

Procurement Profile:	FY 13	FY 14
Quantity:		
Communication Set	30	0
Technical Support Set	66	0
Media Exploitation Light	86	0
Module Refresh	0	166
Communication Suite	0	230

Developer/Manufacturer:  
 Various, including: Canon U.S.A., Inc., Lake Success, NY; Harris Communications Corp, Rochester, NY; IDEAL Technology Corporation, Orlando, FL; Klas Telecom, Inc., Washington, D.C.; Panasonic Corp., Secaucus, NY; and Thales Communications, Rockville, MD.

**MAGTF SECONDARY IMAGERY DISSEMINATION SYSTEM (MSIDS)**

**DESCRIPTION**

Marine Air-Ground Task Force (MAGTF) Secondary Imagery Dissemination System (MSIDS) provides the capability to capture key ground view perspective intelligence and puts an imagery collection asset with the local commander. The MSIDS Family of Systems (FoS) meets three different mission profiles. The first mission profile provides the MAGTF the capability to take digital imagery of named areas of interest from forward positions and transmit them via organic field radios to tactical and theater command and control facilities in near real time. The second mission profile provides all MAGTF intelligence sections, artillery, tank, civil affairs, Combat Engineer Battalions, logistics units and other various units the ability to take pictures and video for Battle Damage Assessment, Force Protection or intelligence gathering. The third mission profile is to edit, manipulate, annotate, and brief collected imagery, and to disseminate imagery and intelligence products to adjacent or higher units.

**OPERATIONAL IMPACT**

MSIDS provides the only self-contained, hand-held, ground-perspective imagery capability to MAGTF units and is essential in intelligence collection, mission planning, battle damage assessments and force protection.

**PROGRAM STATUS**

MSIDS consists entirely of commercially available off-the-shelf components. Approximately one-fifth of the system’s components are refreshed each year. The approved acquisition objective is 5,698 units.

Procurement Profile:	FY 13	FY 14
Quantity:		
Data Controllers	1000	0
Advanced Video Suites	65	0
Thermal Components	100	0



Advanced Camera Suites	0	606
Basic Camera Suites	0	1182
Base Stations	0	137

**Developer/Manufacturer:**

Various vendors, including Canon, Epson, Sony, Panasonic, ITT, Bogen-Manfrotto, ViaSat, FLIR, Integrity Data Inc.

## REMOTE VIDEO VIEWING TERMINAL (RVVT)

### DESCRIPTION

The RVVT allows viewing and exploitation of video and metadata from multiple unmanned aircraft systems and manned LITENING pod-equipped aircraft. As a program of record, the RVVT will replace the previous two generations of remote viewing terminals (ROVER and VideoScout) that were fielded through the Urgent Universal Need Statement process. RVVT will also assume the operations and sustainment of these legacy systems.

### OPERATIONAL IMPACT

RVVT provides the Marine Air Ground Task Force (MAGTF) a more complete view of the battlefield by allowing Marines to view video from various theater and organic intelligence, surveillance and reconnaissance assets that are in the MAGTF area of operations in a compact portable form-factor. RVVT allows Marine forward air controllers, joint tactical air controllers, and commanders at regiment and below to view real-time video, capture and exploit the data, and receive platform metadata for precision targeting thus increasing battlespace awareness and enabling the warfighter to characterize and engage threats more effectively.

### PROGRAM STATUS

RVVT is in the pre-materiel solution analysis phase. The current focus of the program is maintenance

and sustainment of the VideoScout systems until the RVVT program of record systems are fielded, which is scheduled for FY 2016. Milestone B is scheduled for FY 2013, and Milestone C is scheduled for FY 2015. The Marine Corps procured a total of 599 VideoScout systems during FY 2010 and FY 2011 and is considering an engineering change proposal to meet a Suite A (Type 1) encryption requirement for VideoScout.

Procurement Profile:	FY 13	FY 14
Quantity:		
VideoScout	0	0
RVVT	0	36

## WIDE FIELD OF VIEW PERSISTENT SURVEILLANCE (WVPS)

### DESCRIPTION

In response to a Joint Urgent Operations Need Statement (JUONS) from the U.S. Central Command, the Marine Corps is developing and fielding a ground receive station (GRS) with automated data handling and intelligence analysis that will enable Marine Forces to employ a dedicated Wide Area Airborne Surveillance sensor payload on Marine Corps organic unmanned aerial system (UAS). WVPS will be able to downlink wide area images from any Common Data Link (CDL)-compliant wide area system, and will direct collection from the Wide Focal Plane Array Camera (WFPAC). In near real time, it will generate automated tracking of vehicle-sized movers and perform intelligence fusion on a subset of the imagery. Post-mission, WVPS will generate automated tracking of all vehicle-sized movers and perform intelligence fusion across the entire mission area and duration.

WVPS is one of four multi-service programs supporting the WFPAC quick-reaction capability in response to the JUONS. As part of the MCISR-E, the GRS will be integrated into the DCGS-MC program of record.

### OPERATIONAL IMPACT

This system will provide the ability to receive and disseminate imagery down-linked from the wide field of view sensor via the SIPRnet. WFVPS imagery will be incorporated into multi-intelligence products at the Intelligence Battalion.

### PROGRAM STATUS

The system is scheduled for a Field User Evaluation during the first quarter of 2013. The evaluation will inform future program of record efforts. In FY 2013, WFVPS will transition to a program of record. Ground receive stations will be fielded to each Marine Expeditionary Force and to the supporting establishment.

Procurement Profile:	FY 13	FY 14
Quantity:	3	1

Developer/Manufacturer:  
Los Alamos National Laboratory, NM.

## 21ST CENTURY MARINE EXPEDITIONARY INTELLIGENCE ANALYSIS (MEIA-21)

### DESCRIPTION

MEIA-21 is a non-material analysis modernization program to improve intelligence analysis from the Company Level Intelligence Cell to the Service Intelligence Center. The program creates the applied analytic tradecraft methods used to answer mission-specific questions that lead to the production of intelligence. Applied tradecraft is created by specialist organizations within Marine Intelligence that consolidate and improve intelligence techniques and methods. As it is developed, applied analytic tradecraft is inserted in an enterprise environment for intelligence analysts to use in addressing a wide range of operational requirements. MEIA-21 is the Marine Corps Director of Intelligence analysis program to provide applied analytic

techniques to meet the intelligence challenges of the 21st-century operating environment.

### OPERATIONAL IMPACT

MEIA-21 provides Marine intelligence analysts at all levels within the Marine Air Ground Task Force a strong set of applied analytic tradecraft to accurately answer intelligence questions and provide commanders with actionable intelligence. It institutionalizes new and proven analytic techniques by creating a culture within Marine Intelligence to structure, capture, refine, train, archive, and disseminate analytic tradecraft. MEIA-21 is the pathway to overcoming the analytic shortfalls of the present and to increasing and sustaining the professionalism of Marine Corps intelligence analysis. The creation of analytically rigorous Marine Corps applied intelligence tradecraft, based on principles from the social and physical sciences, will lead to higher reliability, reduced errors, significant explanatory power, and self-correcting techniques. Further, it generates new knowledge and reliable, actionable intelligence about the enemy and the environment in which the enemy operates.

### PROGRAM STATUS

In 2011, Marine Intelligence collected, improved, and disseminated 27 individual elements of applied analytic tradecraft for training and operational use. In 2012, Center for Marine Expeditionary Intelligence Knowledge (CMEIK) refined and validated 23 Structured Methods and Techniques (SMATs) with an external Social Science Board; created nine new SMATs; produced a handbook of social science theories applicable to SMATs; and developed a framework for foundational SMATs to support and/or feed into other, more complex SMATs. CMEIK conducted five training sessions targeted at developing tradecraft facilitators at intelligence units throughout the Marine Corps intelligence enterprise. In addition, CMEIK collaborated with Advanced Analytics tool developers to automate some of the processes associated with SMATs.

## TACTICAL EXPLOITATION OF NATIONAL CAPABILITIES (TENCAP)

### DESCRIPTION

The mission of the Marine Corps TENCAP program is to exploit in-service national reconnaissance systems and programs by examining both technical and operational capabilities, implementing training, and sponsoring prototyping capabilities and concept demonstrations to directly support Marine Corps operating forces. The program objectives seek to optimize the tactical use of current national systems, maximize the tactical utility built into future systems, and rapidly deliver emerging technologies to the operating forces in order to provide greater access to national systems data.

### OPERATIONAL IMPACT

The TENCAP program advocates for tactical requirements to be addressed in the development of new national intelligence systems. The program transitions results of demonstrations and field user valuations to the Marine Corps Intelligence Activity for Service analytical use; Marine Corps Systems Command for acquisition decisions; Marine Corps Combat Development Command for appropriate doctrine, training, or force structure actions; or other government organizations as appropriate. The program also supports and conducts various intelligence planning and study efforts as directed by the Marine Corps Director of Intelligence.

### PROGRAM STATUS

The Marine Corps TENCAP program moved under the operational control and governance of the Intelligence Department Technology Innovation Division during the spring of 2011.

## TEAM PORTABLE COLLECTION SYSTEM MULTI-PLATFORM CAPABLE (TPCS-MPC)

### DESCRIPTION

The TPCS-MPC provides the Marine Air Ground Task Force (MAGTF) with integrated, semi-automated signals intelligence (SIGINT) equipment. With it, MAGTF Marines can conduct communications intelligence, direction-finding, and computer-aided SIGINT analysis, as well as provide indications and warnings, electronic warfare support, and limited cyber operations. TPCS-MPC is scalable to meet tactical mission requirements, having single collection outstations for stand-alone requirements and integrated capabilities. The primary emphasis is on rapid procurement of commercially available off-the-shelf, government off-the-shelf, and non-developmental item technologies and systems. The program focuses on limited integration to allow rapid fielding of new capabilities to Radio Battalions (RadBns). TPCS-MPC suites consist of platform integration kits (PIK) that provide the interface devices required to deploy various configurations of the exploitation modules on non-dedicated platforms, such as the Mine-Resistant Ambush-Protected (MRAP) vehicle.

### OPERATIONAL IMPACT

TPCS-MPC will provide enhanced SIGINT suites and PIKs to enable installation of the system into RadBns and Marine Special Operations Command organic ground platforms. TPCS-MPC will be operated in a dismounted mode, or stationary mode and mobile modes when installed on a platform. In response to the Deputy Commandant for Combat Capabilities and Integration guidance, the program office has pursued development of PIKs to provide armored protection against asymmetric threats. PIK development will be determined by existing and planned RadBn platform assets. Planned PIK development will be the up-armored High Mobility Multipurpose Wheeled Vehicle, the Integrated Assault Platform, the MRAP and the Light Armored Vehicle.

**PROGRAM STATUS**

The TPCS-MPC Block 0 achieved Full Operational Capability in 2009. TPCS-MPC achieved Milestone C in May 2011 and Initial Operational Capability in third quarter of FY 2012. Additional systems will be delivered in second and fourth quarter FY 2013 with full operational capability planned for fourth quarter FY 2013.

Procurement Profile:	FY 13	FY 14
Quantity:		
Master Station	29	0
Advanced Case	35	0
Modular Case	54	0
Locate Case	73	0
Work Station	236	0

**INTELLIGENCE SUPPORT TO CYBERSPACE OPERATIONS**

**DESCRIPTION**

The development of Marine Corps cyberspace capabilities is critical in ensuring Marine Air Ground Task Force (MAGTF) Commanders can successfully maneuver and achieve desired effects within the cyberspace domain. MAGTF Commanders rely on timely and accurate intelligence, and increasingly this intelligence resides in the cyberspace domain. To achieve operational objectives in cyberspace, the Marine Corps is coordinating across multiple departments and agencies to develop a codified, repeatable, and integrated process for providing cyberspace capabilities to the MAGTF. This process will require both offensive and defensive capabilities which are synchronized with external cyberspace organizations that have capabilities and authorities not resident in the MAGTF.

Critical to this process is a cyber national tactical integration (NTI) model that draws on existing national authorities and capabilities to meet emerging cyber requirements from the operating forces. This effort will link the existing cyber capabilities already resident within the MAGTF, such as Radio Battalion, to national agencies and create a more responsive MAGTF support process. Additionally, these cyberspace capabilities, when supported by the larger Marine Corps Intelligence Surveillance Reconnaissance Enterprise, will provide the MAGTF Commander comprehensive and multi-sensor support to cyberspace operations and enable the exploitation, defense, and delivery of fires throughout the cyber domain.

HQMC Intelligence Department, Marine Forces Cyber Command, and other Marine Corps entities and stakeholders have partnered with Marine Corps and other national organizations to develop the required policies to support this critical cyber NTI process. Included in this process is assessing required manpower growth in select cyber-related Marine Operational Specialties, reviewing cyber-related training requirements, research materiel and non-materiel solutions to existing cyberspace capability gaps, and developing initiatives to better access and leverage existing national infrastructure to support the MAGTF.





# CHAPTER 4



## MARINE CORPS ALMANAC

### INTRODUCTION

This chapter provides a brief snapshot of the Marine Corps at the end of FY 2012. It includes a brief description of Marine Corps demographics, fiscal posture, and the age of primary equipment. As such it gives some insight into the resources that we fuse together to create the world's premier fighting force.

## ACTIVE DUTY OFFICER ACCESSIONS

Type	Number	Percent
MECEP/ECP/MCP	174	10.4%
NROTC	228	13.6%
Officer Candidate Course	216	12.9%
Platoon Leader Course	566	33.9%
Military Academies	261	15.6%
Warrant Officer Program	216	12.9%
Other	10	0.6%
<b>Total</b>	<b>21,822</b>	<b>100%</b>

## ACTIVE DUTY OFFICER AGE DISTRIBUTION

Age	Number	Percent
<22	22	0.1%
22	269	1.2%
23	755	3.5%
24	1,012	4.6%
25	1,215	5.6%
26	1,219	5.6%
27	1,235	5.7%
28	1,136	5.2%
29	1,103	5.1%
30	1,064	4.9%
31-35	4,683	21.5%
36-40	3,972	18.2%
41+	4,091	18.8%
<b>Total</b>	<b>21,776</b>	<b>100.0%</b>

## ACTIVE DUTY OFFICER GRADE DISTRIBUTION

Rank	Number	Percent
Warrant Officer	2,092	9.6%
Second Lieutenant	2,511	11.5%
First Lieutenant	3,657	16.8%
Captain	6,909	31.7%
Major	3,906	17.9%
Lieutenant Colonel	1,923	8.8%
Colonel	687	3.2%
General Officer	91	0.4%
<b>Total</b>	<b>21,776</b>	<b>100%</b>



## ACTIVE DUTY OFFICER OCCUPATIONAL FIELD DISTRIBUTION

Primary MOS Code	Description	Female Officer	Male Officer	Total Officer
01	Personnel & Administration	184	565	749
02	Intelligence	90	1,307	1,397
03	Infantry	0	2,594	2,594
04	Logistics	209	1,582	1,791
06	Communications	90	1,168	1,258
08	Field Artillery	0	1,068	1,068
09	Training	0	3	3
11	Utilities	3	41	44
13	Engineer	41	672	713
18	Tank & AAV	0	377	377
21	Ordnance	2	138	140
23	Ammunition & EOD	3	138	141
26	Signals Intelligence	3	38	41
28	Ground Electronics Maintenance	4	102	106
30	Supply Administration & Operations	92	676	768
31	Distribution Management	4	30	34
33	Food Service	6	35	41
34	Financial Management	35	340	375
35	Motor Transport	1	102	103
41	Marine Corps Community Services	2	11	13
43	Public Affairs	42	121	163
44	Legal Services	84	554	638
46	Combat Camera	2	20	22
48	Recruiting & Career Planning	0	15	15
55	Music	2	20	22
57	CBRN Defense	3	117	120
58	Military Police and Corrections	27	284	311
59	Electronics Maintenance	1	74	75
60	Aircraft Maintenance	29	454	483
63	Organizational Avionics Maintenance	1	134	135
65	Aviation Ordnance	2	91	93
66	Aviation Logistics	31	277	308
68	METOC Services	1	32	33
70	Airfield Services	1	37	38
72	Air Control, Support & Anti-Air	56	598	654
73	Navigation Officer	1	26	27
75	Pilot/NFOs	199	5,343	5,542
80	Miscellaneous Requirements	97	1,244	1,341
<b>Total</b>		<b>1,348</b>	<b>20,428</b>	<b>21,776</b>

## ACTIVE DUTY OFFICER GENDER DISTRIBUTION

	Number	Percent
Female	1,348	6.2%
Male	20,498	93.8%
<b>Total</b>	<b>21,776</b>	<b>100%</b>

## ACTIVE DUTY OFFICER GRADE BY GENDER

Rank	# Male	% Male	# Female	% Female	Total
Warrant Officer 1	185	0.9%	16	1.2%	201
Chief Warrant Officer 2	876	4.3%	43	3.2%	919
Chief Warrant Officer 3	547	2.7%	31	2.3%	578
Chief Warrant Officer 4	280	1.4%	14	1.0%	294
Chief Warrant Officer 5	95	0.5%	5	0.4%	100
2nd Lieutenant	2,258	11.1%	253	18.8%	2,511
1st Lieutenant	3,389	16.6%	268	19.9%	3,657
Captain	6,461	31.6%	448	33.2%	6,909
Major	3,704	18.1%	202	15.0%	3,906
Lieutenant Colonel	1,875	9.2%	48	3.6%	1,923
Colonel	668	3.3%	19	1.4%	687
General Officers	90	0.4%	1	0.1%	91
<b>Total</b>	<b>20,428</b>	<b>100.0%</b>	<b>1,348</b>	<b>100.0%</b>	<b>21,776</b>

## ACTIVE DUTY OFFICER MARINE FAMILIES

Civilian Spouses	Military Spouses	Guard/Reserve Spouses	Children/Other Dependents
14,169	891	63	23,447

## ACTIVE DUTY OFFICER RACIAL AND GENDER DISTRIBUTION

Rank	Black Female	Black Male	Hispanic Female	Hispanic Male	White Female	White Male	Other Female	Other Male	Total
WO/CWO	22	231	23	220	57	1,389	7	143	2,092
2ndLt	24	103	15	134	193	1,848	21	173	2,511
1stLt	8	118	21	172	187	2,717	52	382	3,657
Capt	24	279	40	348	346	5,403	38	431	6,909
Maj	26	273	17	220	129	2,988	30	223	3,906
LtCol	3	103	3	71	39	1,615	3	86	1,923
Col	1	22		9	16	623	2	14	687
Gen		6	1	3		79		2	91
<b>Total</b>	<b>108</b>	<b>1,135</b>	<b>120</b>	<b>1,177</b>	<b>967</b>	<b>16,662</b>	<b>153</b>	<b>1,454</b>	<b>21,776</b>

## ACTIVE AND RESERVE ENLISTED ACCESSIONS

Non-prior Service Accessions	30,508
Prior Service Accessions	6
<b>Total Active Accessions</b>	<b>30,514</b>
Non-prior Service Accessions	5,450
Prior Service Accessions	4,210
<b>Total Reserve Accessions</b>	<b>9,660</b>
<b>Total USMC</b>	<b>40,174</b>

## ACTIVE DUTY ENLISTED OCCUPATIONAL FIELD DISTRIBUTION

Primary MOS Code	Description	Female Enlisted	Male Enlisted	Total Enlisted
01	Personnel & Administration	1,687	5,401	7,088
02	Intelligence	426	3,137	3,563
03	Infantry	0	31,892	31,892
04	Logistics	476	3,531	4,007
05	MAGTF Plans	41	362	403
06	Communications	1,287	13,505	14,792
08	Field Artillery	0	4,675	4,675
11	Utilities	220	2,627	2,847
13	Engineer	355	7,986	8,341
18	Tank & AAV	0	2,899	2,899
21	Ground Ordnance Maintenance	73	4,107	4,180
23	Ammunition & EOD	201	1,939	2,140
26	Signals Intelligence	392	2,891	3,283
28	Grd. Electronics Maint.	160	4,921	5,081
30	Supply Administration & Operations	1,510	5,344	6,854
31	Distribution Management	114	464	578
33	Food Service	412	1,905	2,317
34	Financial Management	234	1,051	1,285
35	Motor Transport	783	13,071	13,854
41	Marine Corps Community Services	12	123	135
43	Public Affairs	125	355	480
44	Legal Services	111	428	539
46	Combat Camera	116	403	519
48	Recruiting & Career Planning	65	379	444
55	Music	164	793	957
57	CBRN Defense	61	852	913
58	Military Police & Corrections	361	4,361	4,722
59	Electronics Maintenance	89	1,498	1,587
60	Aircraft Maintenance	477	4,833	5,310
61	Aircraft Maintenance (Rotary Wing)	263	7,195	7,458
62	Aircraft Maintenance (Fixed Wing)	164	3,945	4,109
63	Organizational Avionics Maintenance	373	4,393	4,766
64	Intermediate Avionics Maintenance	212	2,882	3,094
65	Aviation Ordnance	199	2,724	2,923
66	Aviation Logistics	387	1,747	2,134
68	Meteorology & Oceanography	57	412	469
70	Airfield Services	215	2,016	2,231
72	Air Control, Support & Anti-Air	133	1,907	2,040
73	Navigation Officer	10	200	210
80	Miscellaneous Requirements	529	8,658	9,187
84	Career Recruiting	8	505	513
89	SgtMaj/1stSgt	91	1,507	1,598
<b>Total</b>		<b>12,593</b>	<b>163,824</b>	<b>176,417</b>



## ACTIVE DUTY ENLISTED GENDER DISTRIBUTION

	Number	Percent
Female	12,593	7.1%
Male	163,824	92.9%
<b>Total</b>	<b>176,417</b>	<b>100%</b>

## ACTIVE DUTY ENLISTED GRADE BY GENDER

Rank	# Male	% Male	# Female	% Female	Total
Private	12,553	7.7%	800	6.4%	13,353
Private First Class	18,670	11.4%	1,712	13.6%	20,382
Lance Corporal	44,708	27.3%	3,586	28.5%	48,294
Corporal	32,170	19.6%	2,719	21.6%	34,889
Sergeant	26,521	16.2%	1,973	15.7%	28,494
Staff Sergeant	15,347	9.4%	996	7.9%	16,343
Gunnery Sergeant	8,547	5.2%	540	4.3%	9,087
1stSgt/MSgt	3,754	2.3%	203	1.6%	3,957
SgtMaj/MGySgt	1,554	0.9%	64	0.5%	1,618
<b>Total</b>	<b>163,824</b>	<b>100%</b>	<b>12,593</b>	<b>100%</b>	<b>176,417</b>

## ACTIVE DUTY ENLISTED MARINE FAMILIES

Civilian Spouses	Military Spouses	Guard/Reserve Spouses	Children/Other Dependents
72,530	6,438	463	85,554

## ACTIVE DUTY ENLISTED RACIAL AND GENDER DISTRIBUTION

Rank	Black Female	Black Male	Hispanic Female	Hispanic Male	White Female	White Male	Other Female	Other Male	Total
Private	111	1,234	131	1,763	512	8,987	46	569	13,353
Private First Class	272	1,825	296	2,383	1,044	13,576	100	886	20,382
Lance Corporal	518	3,660	528	4,846	2,277	33,979	263	2,223	48,294
Corporal	417	3,012	418	3,300	1,604	23,961	280	1,897	34,889
Sergeant	340	2,890	382	3,688	1,023	17,759	228	2,184	28,494
Staff Sergeant	209	2,236	219	2,552	444	9,352	124	1,207	16,343
Gunnery Sergeant	119	1,434	122	1,418	241	5,069	58	626	9,087
1stSgt/MSgt	68	733	36	514	83	2,216	16	291	3,957
SgtMaj/MGySgt	24	394	9	146	28	924	3	90	1,618
<b>Total</b>	<b>2,078</b>	<b>17,418</b>	<b>2,141</b>	<b>20,610</b>	<b>7,256</b>	<b>115,823</b>	<b>1,118</b>	<b>9,973</b>	<b>176,417</b>

## RESERVE OFFICER AGE DISTRIBUTION

Age	Number	Percent
<22	0	0.00%
22	7	0.17%
23	34	0.84%
24	56	1.38%
25	71	1.75%
26	91	2.25%
27	107	2.64%
28	131	3.23%
29	124	3.06%
30	125	3.08%
31-35	738	18.21%
36-40	843	20.80%
41-45	953	23.52%
46-50	600	14.81%
51-55	156	3.85%
56-60	15	0.39%
61+	1	0.02%
<b>Total</b>	<b>4,052</b>	<b>100%</b>

## RESERVE OFFICER GRADE DISTRIBUTION

Rank	Number	Percent
Warrant Officer	297	7.3%
Second Lieutenant	383	9.5%
First Lieutenant	181	4.5%
Captain	828	20.4%
Major	1,083	26.7%
Lieutenant Colonel	955	23.6%
Colonel	313	7.7%
General Officer	12	0.3%
<b>Total</b>	<b>4,052</b>	<b>100%</b>

## SELECTED MARINE CORPS RESERVE OFFICER OCCUPATIONAL FIELD DISTRIBUTION

Primary MOS Code	Description	Female Officer	Male Officer	Total Officer
01	Personnel & Administration	40	116	156
02	Intelligence	28	334	362
03	Infantry	0	550	550
04	Logistics	61	329	390
05	MAGTF Plans	0	1	1
06	Communications	17	210	227
08	Field Artillery	0	221	221
09	Training	0	0	0
11	Utilities	0	12	12
13	Engineer	13	154	167
18	Tank & AAV	0	112	112
21	Ordnance	0	6	6
23	Ammunition & EOD	0	8	8
26	Signals Intelligence	1	2	3
28	Ground Electronics Maintenance	0	5	5
30	Supply Administration & Operations	23	138	161
31	Distribution Management	0	2	2
33	Food Service	0	1	1
34	Financial Management	6	27	33
35	Motor Transport	0	17	17
41	Marine Corps Community Services	0	0	0
43	Public Affairs	13	19	32
44	Legal Services	17	191	208
46	Combat Camera	0	0	0
48	Recruiting & Career Planning	0	0	0
55	Music	0	0	0
57	CBRN Defense	1	32	33
58	Military Police and Corrections	6	53	59
59	Electronics Maintenance	0	3	3
60	Aircraft Maintenance	2	43	45
63	Organizational Avionics Maintenance	0	3	3
65	Aviation Ordnance	0	10	10
66	Aviation Logistics	6	31	37
68	METOC Services	0	2	2
70	Airfield Services	0	8	8
72	Air Control, Support & Anti-Air	15	104	119
73	Navigation Officer	0	4	4
75	Pilot/NFOs	22	560	582
80	Miscellaneous Requirements	14	459	473
<b>Total</b>		<b>285</b>	<b>3,767</b>	<b>4,052</b>



## RESERVE ENLISTED AGE DISTRIBUTION

Age	Number	Percent
17-18	810	2.11%
19	2,751	7.15%
20	3,637	9.45%
21	4,169	10.83%
22	4,356	11.32%
23	4,056	10.54%
24	3,899	10.13%
25	3,164	8.22%
26-30	7,432	19.31%
31-35	2,258	5.87%
36-40	1,057	2.75%
41-45	632	1.64%
46-50	225	0.58%
51-55	39	0.10%
56-60	6	0.02%
60+	1	0.00%
<b>Total</b>	<b>38,492</b>	<b>100%</b>

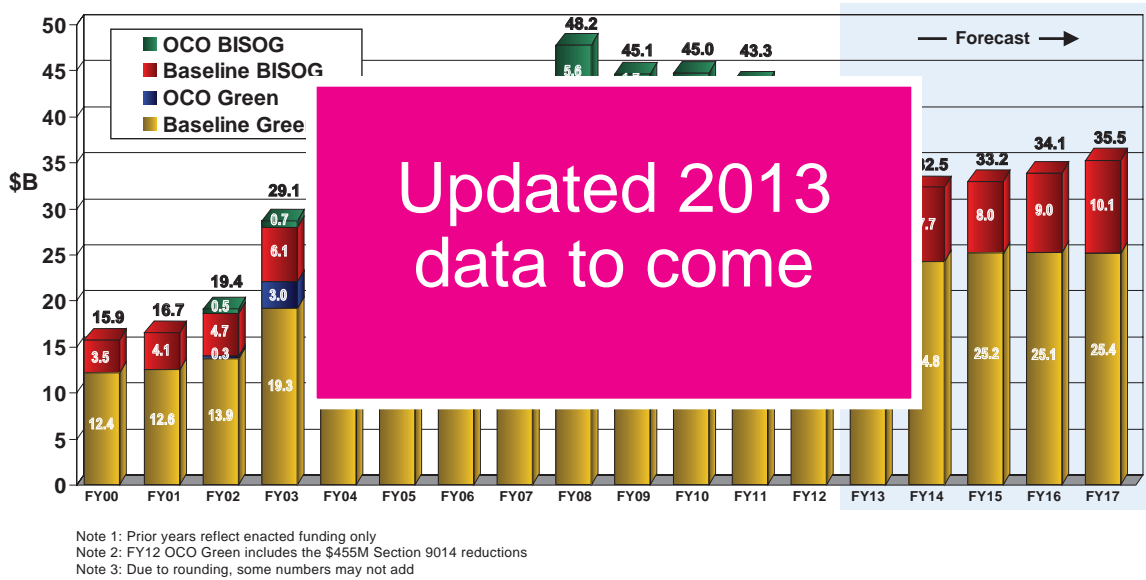
## RESERVE ENLISTED GRADE DISTRIBUTION

Rank	Number	Percent
Private	3,224	8.38%
Private First Class	4,711	12.24%
Lance Corporal	15,540	40.37%
Corporal	6,275	16.30%
Sergeant	5,076	13.19%
Staff Sergeant	1,896	4.93%
Gunnery Sergeant	1,153	3.00%
1stSgt/MSgt	435	1.13%
SgtMaj/MGySgt	182	0.47%
<b>Total</b>	<b>38,492</b>	<b>100%</b>

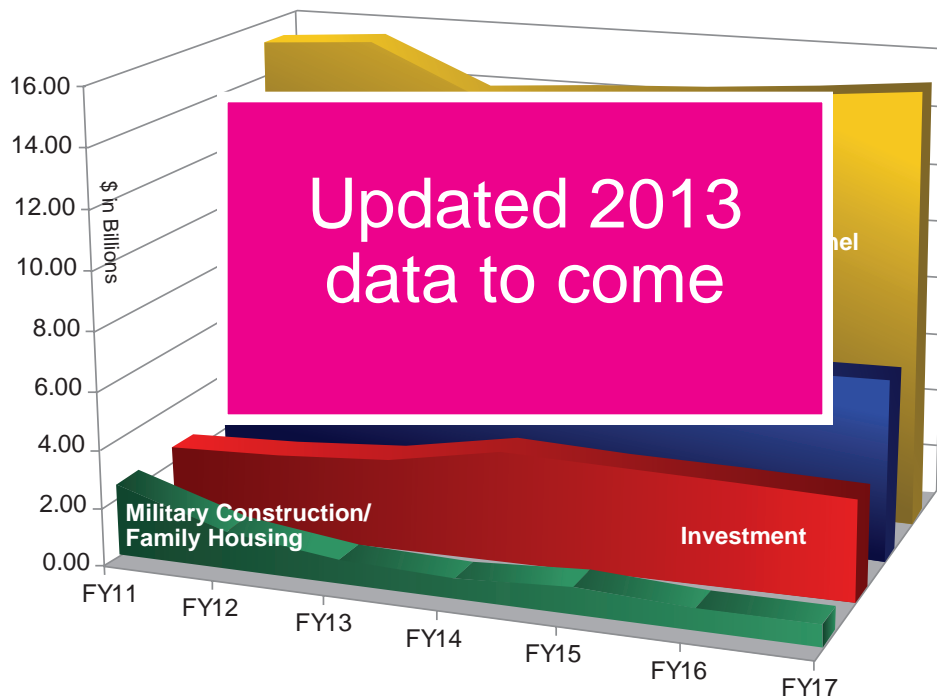
## RESERVE ENLISTED OCCUPATIONAL FIELD DISTRIBUTION

Primary MOS Code	Description	Female Enlisted	Male Enlisted	Total Enlisted
01	Personnel & Administration	329	1,297	1,626
02	Intelligence	37	560	597
03	Infantry	0	7,947	7,947
04	Logistics	96	1,224	1,320
05	MAGTF Plans	2	31	33
06	Communications	137	3,194	3,331
08	Field Artillery	0	1,129	1,129
09	Training	0	0	0
11	Utilities	48	706	754
13	Engineer	88	3,137	3,225
18	Tank & AAV	0	719	719
21	Ground Ordnance Maintenance	12	892	904
23	Ammunition & EOD	19	478	497
26	Signals Intelligence	9	34	43
28	Ground Electronics Maintenance	7	658	665
30	Supply Administration & Operations	234	1,303	1,537
31	Distribution Management	25	131	156
33	Food Service	45	525	570
34	Financial Management	8	27	35
35	Motor Transport	121	3,999	4,120
41	Marine Corps Community Services	0	1	1
43	Public Affairs	1	15	16
44	Legal Services	1	20	21
46	Combat Camera	3	8	11
48	Recruiting & Career Planning	8	62	70
55	Music	2	1	3
57	CBRN Defense	5	227	232
58	Military Police & Corrections	33	803	836
59	Electronics Maintenance	5	106	111
60	Aircraft Maintenance	36	321	357
61	Aircraft Maintenance (Rotary Wing)	10	323	333
62	Aircraft Maintenance (Fixed Wing)	7	251	258
63	Organizational Avionics Maintenance	10	192	202
64	Intermediate Avionics Maintenance	9	129	138
65	Aviation Ordnance	14	172	186
66	Aviation Logistics	44	199	243
68	Meteorology & Oceanography	1	22	23
70	Airfield Services	25	314	339
72	Air Control, Support & Anti-Air	15	145	160
73	Navigation Officer	1	18	19
80	Miscellaneous Requirements	101	5,373	5,474
84	Career Recruiting	1	37	38
89	SgtMaj/1stSgt	6	207	213
99	Miscellaneous Requirements	0	0	0
<b>Total</b>		<b>1,555</b>	<b>36,937</b>	<b>38,492</b>

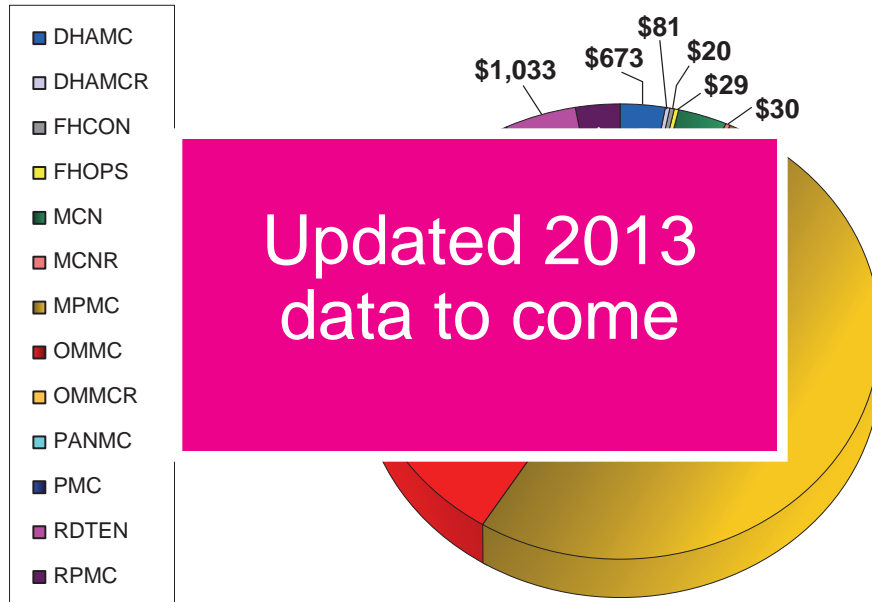
## MARINE CORPS FISCAL RESOURCE OVERVIEW (THEN YEAR DOLLARS)



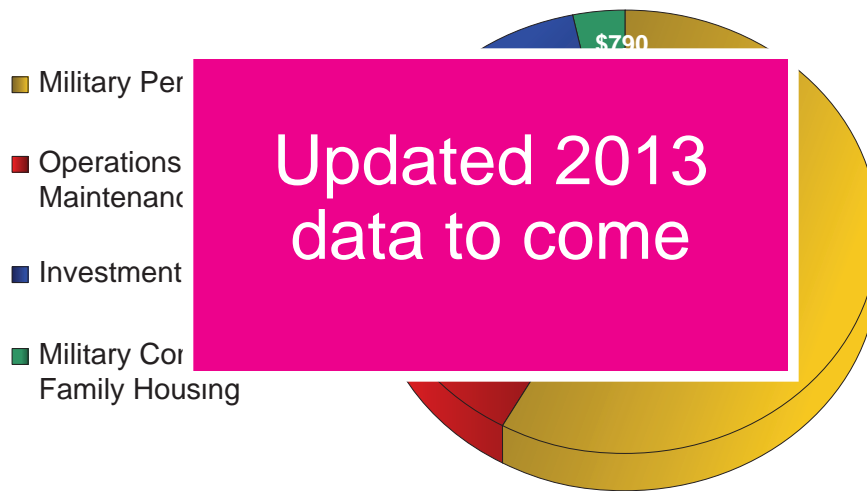
## MARINE CORPS FISCAL LANDSCAPE



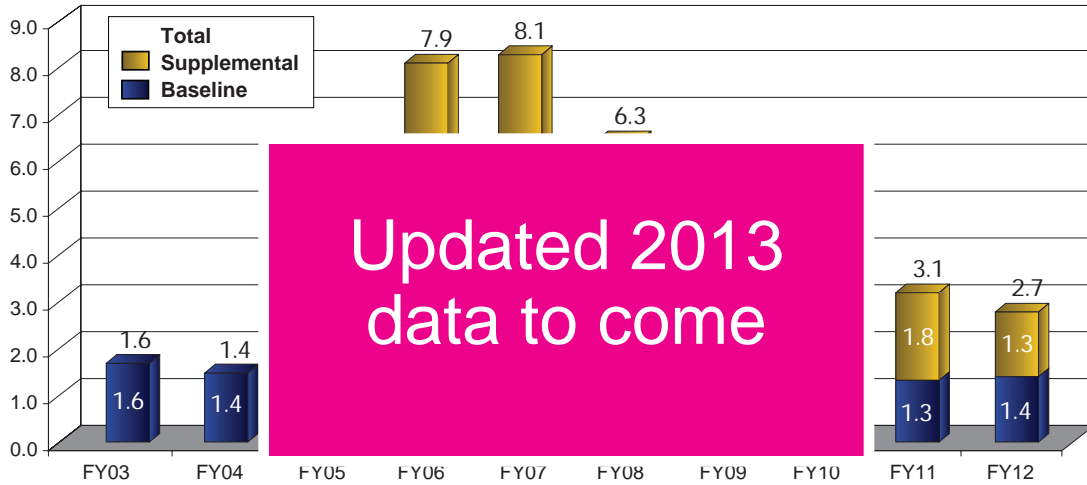
MARINE CORPS FISCAL YEAR 2013 TOTAL BASELINE TOA  
(\$ IN MILLION)



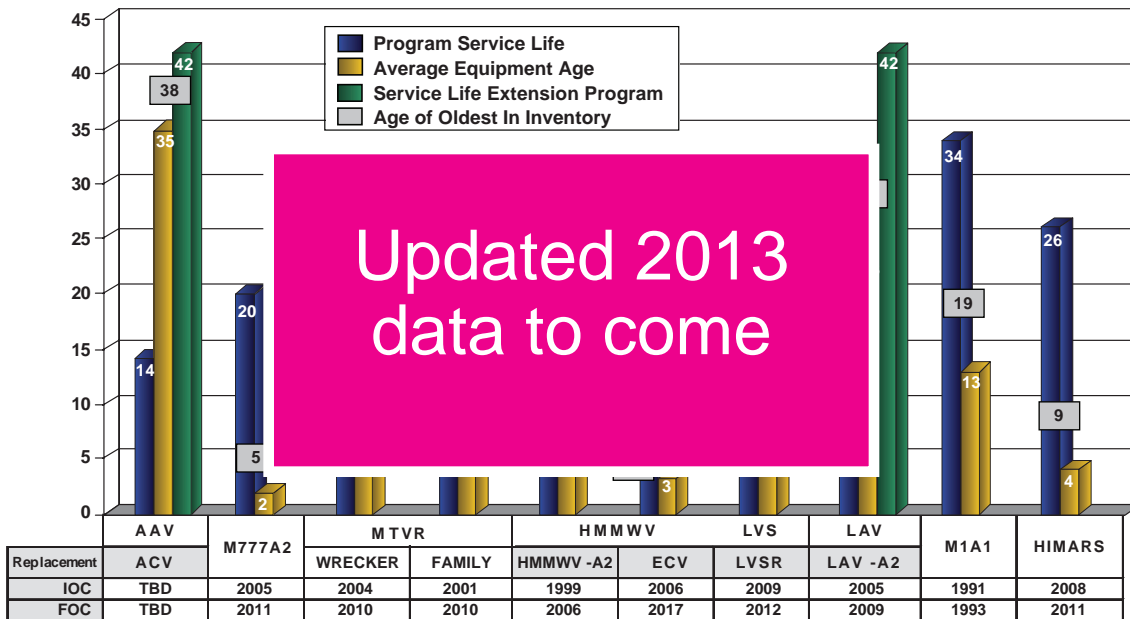
MARINE CORPS FISCAL YEAR 2013 APPROPRIATIONS



MARINE CORPS PROCUREMENT SUMMARY (\$ IN MILLION)

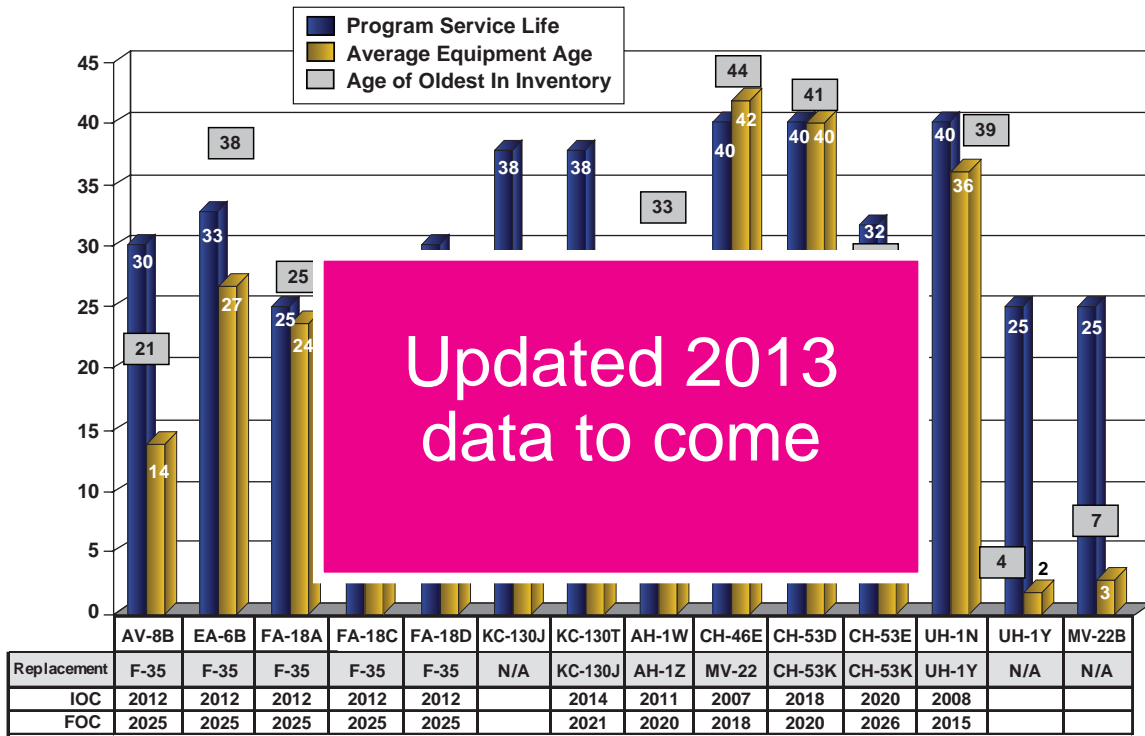


MARINE CORPS SELECTED GROUND EQUIPMENT AGE





## MARINE CORPS SELECTED AVIATION EQUIPMENT AGE




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*The Pacific is a vast maritime theater that is vital to our nation's strategic interests. In support of our national strategy we are adjusting our Pacific laydown to meet the challenges of the 21st century. By doing so, Marines are uniquely suited to provide a forward and real presence as America's Expeditionary Force in Readiness. We will continue to strengthen relationships through engagement with allies and build new partnerships across the breadth of this region where the Marine Corps came of age.*

**General James F. Amos, Commandant of the Marine Corps**



**U.S. MARINE CORPS**





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