The U.S. Marine Corps (USMC) is the nation's expeditionary armed force, positioned and ready to respond to crises around the world. Marine units assigned aboard ships (“soldiers of the sea”) or at bases abroad stand ready to project U.S. power into crisis areas. Marines also serve in a range of unique missions, from combat defense of U.S. embassies abroad under attack to operating the President’s helicopter fleet. Although Marines have a wide variety of individual assignments, the focus of every Marine is on combat; every Marine is first a rifleman. The USMC has positioned itself for crisis response and has evolved its concepts to leverage its equipment more effectively to support operations in a heavily contested maritime environment such as the one found in the Western Pacific. Even though force levels have been decreasing in Afghanistan as operations draw down, the military will maintain 9,800 troops in Afghanistan to support its mission in 2015, and the Marines will make up a portion of those troops. Worldwide, over 31,000 Marines are forward deployed and engaged. Throughout the year, Marines engage in various operations elsewhere; for example, they supported the evacuation of the U.S. embassy in Sana’a, Yemen, in 2015.

Per the Defense Strategic Guidance (DSG), maintaining the Corps’ crisis response capability is critical. Thus, given the fiscal constraints imposed, the Marines have prioritized “near-term readiness” at the expense of other areas, such as capacity, capability, modernization, home station readiness, and infrastructure. This trade-off is a short-term fix to meet immediate needs: Over the longer term, the degradation of investment in equipment will lead to lowered readiness.

**Capacity**

The Marine Corps has managed the reduction in funding by cutting capacity. The Corps’ measures of capacity are similar to the Army’s: end strength and units (battalions for the Marines and brigades for the Army). End strength has been decreased from a force of 202,100 Active personnel in fiscal year (FY) 2012 to 184,100 in FY 2015. Of these 184,100 Marines, 1,400 were funded from the Overseas Contingency Operations (OCO) budget. For FY 2016, the Marine Corps requested a pause in capacity cuts (to remain at an end strength of 184,000) in order to reduce the “impact on deployment to dwell ratios” and “assess the impact of its four[-]year drawdown.” The drawdown is expected to continue in FY 2017, when the Corps will reach an “enduring” end strength of 182,000 Active personnel, funded entirely from the base budget. The Department of Defense estimated in 2014 that if sequestration cuts occurred in FY 2016, end strength would be cut further to 175,000 by FY 2017. With a force of that size, the USMC would be unable to meet the requirements of the DSG and, according to General Joseph Dunford, Commandant of the Marine Corps, a new strategy would need to be developed.
The Marine Corps organizes itself in infantry battalions, which are its basic combat unit. A battalion has about 900 Marines and includes three rifle companies, a weapons company, and a headquarters and service company. The overall reductions in end strength left the USMC with 23 infantry battalions in the Active Component in FY 2015, down from 25 in FY 2014. While funding at the requested levels for FY 2016 would yield an additional Active infantry battalion, under full sequestration, USMC end strength would be able to support only 21 infantry battalions, which, according to General Dunford, would leave the USMC “with fewer active duty battalions and squadrons than would be required for a single major contingency.”

Marine Aviation units have been particularly stressed by insufficient funding. Although operational requirements have not decreased, fewer Marine aircraft are available for tasking or training. For example, the number of active component squadrons (including both fixed wing and rotary wing aircraft) has decreased from 58 in 2003 to 55 in 2015. Recently, it was announced that three of these active component squadrons would transition to the reserve component, meaning that the Corps will have 52 active squadrons for the foreseeable future. Approximately 33 percent of these 52 active duty squadrons are deployed, and 17 percent are in a pre-deployment phase. Any reduction in Marine Corps aviation capability has a direct effect on overall Corps combat capability, as the Corps usually fights with its ground and aviation forces integrated as Marine Air-Ground Task Forces (MAGTFs).

Additionally, the current inventory of non-commissioned officers and staff non-commissioned officers does not meet USMC force structure requirements. This will pose readiness challenges for the Corps as the shortage of “small unit leaders with the right grade, experience, technical skills and leadership qualifications” grows.

In 2010, the USMC determined that its ideal force size would be 186,800 in light of the requirements of the President’s National Security Strategy. However, given the budget pressures from the Budget Control Act (BCA) of 2011 and the newer 2012 DSG, the Corps decided that a force size of “182,100 active component Marines could still be afforded with reduced modernization and infrastructure support.”

One impact of reduced capacity is a reduction in dwell time. The stated ideal deployment-to-dwell (D2D) time ratio is 1:3 (seven months deployed for every 21 months at home), which is possible with 186,000 troops. The “fundamental difference” between that optimal force size and an active end strength of 182,000 is a lower D2D ratio of 1:2, which translates to roughly seven-month deployments separated by stretches of 14 months at home. Under the budget caps imposed by the BCA of 2011, capacity will be reduced even further, and the dwell ratio for the Marine Corps could fall to 1:1. This increase in deployment frequency would worsen the degradation of readiness as people and equipment would be used more frequently, with less time to recover between deployments.

**Capability**

The nature of the Marine Corps’ crisis response role requires capabilities that span all domains. The USMC ship requirement is managed by the Navy and is covered in the Navy’s section of the Index. The Marine Corps is focusing on “essential modernization” and emphasizing programs that “underpin our core competencies,” making the Amphibious Combat Vehicle (ACV) and the F-35 Joint Strike Fighter (JSF) programs its top two priorities.

Of the Marine Corps’ current fleet of vehicles, its amphibious vehicles—specifically, the Assault Amphibious Vehicle (AAV-7A1) and Light Armored Vehicle (LAV)—are the oldest, averaging 36 and 24 years, respectively. Comparatively, the Corps’ M1A1 Abrams inventory is 14 years old with an estimated 34-year life span, and its fleet of light tactical vehicles such as HMMWVs (“Humvees”) is relatively young, averaging six years.

The Corps’ main combat vehicles all entered service in the 1970s and 1980s, and while service life extensions, upgrades, and new generations of designs have allowed the platforms to remain in service, these vehicles are quickly becoming ill-suited to the changing threat environment. For example, with the advent of improvised explosive devices (IEDs), the flat-bottom hulls found on most legacy vehicles are ineffective compared to the more blast-resistant V-shaped hulls incorporated in modern designs.

The Corps’ aircraft have age profiles similar to the Navy’s. The USMC has 264 F/A-18 A-Ds and 27 EA-6Bs in its primary mission aircraft inventory (including one reserve squadron), which are nearing (if they have not already surpassed) their intended lifespans. Unlike the Navy, the Corps did not acquire the newer F/A-18 E/F Super Hornets;
Thus, the older F/A-18 Hornets are going through a service life extension program to extend their lifespan to 10,000 flight hours from the original 6,000 hours.251 This is to bridge the gap to when the F-35Bs and F-35Cs enter service to replace the Harriers and most of the Hornets.

The AV-8B Harrier, designed to take off from the LHA and LHD amphibious assault ships, will be retired from Marine Corps service in 2026.252 Before its retirement, the AV-8B will receive near-term capability upgrades in 2015 and 2017.253 The Corps declared its first F-35B squadron operationally capable on July 31, 2015, after it passed an “Operational Readiness Inspection” test.254 Reservations remain, however, regarding the platform’s reliability following sea trials aboard the USS Wasp. Michael Gilmore, Director of Operational Test and Evaluation for the U.S. Department of Defense, reported reliability figures at less than 50 percent during the readiness inspection test.255

The Marine Corps has one Major Defense Acquisition (MDAP) vehicle program. The Joint Light Tactical Vehicle (JLTV) is a joint program with the Army to acquire a more survivable light tactical vehicle to replace a percentage of the older HMMWV fleet, originally introduced in 1985. The Army retains overall responsibility for JLTV development through its Joint Program Office.256 The Marines intend to purchase 5,500 vehicles (10 percent of a total of 54,599).257 and acquisition of the JLTVs should be completed by FY 2022.258 The program is still in development and previously experienced delays due to a change in requirements, a contract award protest, and concerns regarding technical maturity.259 In 2014, the Corps cancelled the HMMWV Sustainment Modification Initiative, which would have upgraded 13,000 vehicles,260 in order to prioritize JLTV funding.261 Although the Marine Corps has indicated that the JLTV will not be a one-for-one replacement of the HMMWV,262 there are concerns that reduced procurement will create a battlefield mobility gap for some units.263

The JLTV’s FY 2015 plans anticipate that a Production and Deployment Phase Approval decision will be made in the fourth quarter, after which Low Rate Initial Production (LRIP) will follow.264 Following FY 2015 plans for JLTV, the program awarded a low rate initial production (LRIP) contract, which includes a future option of producing JLTVs for the Marine Corps, to defense contractor Oshkosh.265 The Marine Corps procured seven JLTVs in FY 2015.266

The lack of operational detail in the Army’s updated Tactical Wheeled Vehicle Strategy could be an issue for future USMC JLTV procurement and modernization plans.267 Nevertheless, the USMC expects the JLTV program, consisting of “one infantry battalion fully fielded with the JLTV plus a training element,” to reach initial operational capability in the fourth quarter of 2018.268

It should be noted that the Marine Corps has plans to replace the AAV-7A1 and LAV, but those programs are not yet MDAP programs, largely because of recent cancellations and program restructuring. The AAV-7A1 was to be replaced by the Expeditionary Fighting Vehicle (EFV), a follow-on to the cancelled Advanced AAV, but the EFV was also cancelled in 2011 due to technical obstacles and cost overruns. The Amphibious Combat Vehicle, which has taken the place of the EFV, is in the development phase and “has been structured to provide a phased, incremental capability.”269 Similarly, the Corps planned to replace the LAV inventory with the Marine Personnel Carrier (MPC), which would serve as a Light Armored Vehicle with modest amphibious capabilities but would be designed primarily to provide enhanced survivability and mobility once ashore.270

After restructuring its ground modernization portfolio, the Marine Corps determined that it would combine its efforts by upgrading 392 of its legacy AAVs and continuing development of the ACV in order to replace part of the existing fleet and complement the upgraded AAVs.271 This would help the USMC to meet its requirement of having armored lift for 10 battalions of infantry.272 In March 2015, the Marine Corps released its RFP for the ACV program’s engineering and manufacturing development (EMD) phase.273 Brigadier General Joseph Shrader confirmed that this ACV 1.1 increment would not replace the AAV, but rather would serve to “enhance that capability.”274

The ACV 1.1 platform is notable in that it will be an amphibious wheeled vehicle instead of a tracked vehicle, capable of traversing open water only with the assistance of Navy shore connectors such as Landing Craft, Air Cushion Vehicles (LCAC). The ACV 1.2 platform is being planned as a fully amphibious, tracked version.275 Development and procurement of the ACV program will be phased so that the new platforms can be fielded incrementally alongside a number of modernized AAVs.276 Plans call for outfitting six battalions with 200 ACVs by 2023 and for modernizing enough of the current AAV fleet
to outfit four additional battalions, which would allow the Corps to meet its armored lift requirement for 10 battalions. In addition, the Corps will purchase new vehicles based on the MPC concept. In the future, it is likely that this program will become an MDAP.

In FY 2015, the Marine Corps’ largest investment program was the F-35B program. As planned, the F-35B variant will be the first operational variant of the F-35 family and is estimated to reach IOC by late 2015. The service’s total procurement will consist of 420 F-35s (357 F-35Bs and 63 F-35Cs), and the retirement of AV-8Bs and F/A-18A-Ds will begin after the F-35 enters service. As the F-35 enters into service and legacy platforms reach the end of their service life, the Marine Corps expects a near-term inventory challenge. Specifically, this is due to a combination of reduced JSF procurement, increasing tactical aircraft utilization rates, and shortfalls in F/A-18A-D and AV-8B depot facility production. Like the F-35A, the F-35B and F-35C variants are subject to development delays, cost overruns, budget cuts, and production problems. The F-35B in particular was placed on probation in 2011 because of its technical challenges. Probation has since been lifted and the Corps declared initial operational capability (IOC) with its first F-35B squadron, VMFA-121, on July 31, 2015.

Today, the MV-22 program is operating with few problems and nearing completion of the full acquisition objective of 460 aircraft. As of February 2015, the Marine Corps had received 97 Block C MV-22 aircraft and 250 of the 360 aircraft included in the Program of Record. Following deactivation of the final CH-46 squadron in April 2015, the Osprey has replaced the Sea Knight as the USMC’s primary medium lift platform. Currently, there are 13 fully operational capability squadrons to meet these needs, and two additional squadrons are being stood up. The MV-22’s capabilities are in high demand from the Combatant Commanders (COCOMS), and the Corps is adding capabilities such as fuel delivery and use of precision-guided munitions to the MV-22 to enhance its value to the COCOMS.

The USMC heavy lift replacement program, the CH-53K, is a bit more problematic. The CH-53K will replace the Corps’ CH-53E, which averages 25 years. However, the CH-53K is still in development, and critical technologies necessary to achieve the lift requirements are still unproven. The CH-53K’s first flight has been scheduled for 2015, and the helicopter is predicted to reach initial operational capability in 2019. This time line has been disrupted and now faces the prospect of delay due to problems experienced with the airframe’s gearbox and drive-shaft during ground testing. The FY 2016 request asks for continued RDT&E funding and retains the current Program of Record of 200 CH-53Ks.

### Readiness

The Marine Corps’ first priority is to be the crisis response force for the military, which is why investment in readiness has been prioritized over capacity and capability. However, in order to invest in readiness in a time of downward fiscal pressure, the Corps has been forced to reduce end strength and delay investment in modernization. Even though funding for near-term readiness has been relatively protected from cuts, future readiness is threatened by underinvestment in long-term modernization and infrastructure. As General Dunford has explained, extended or long-term imbalance among the USMC “pillars” of readiness, which address both operational and foundational readiness, “will hollow the force and create unacceptable risk for our national defense.” In order to address readiness challenges more effectively, the Marine Corps is undertaking a comprehensive review of manning and readiness reporting systems and developing a plan to enhance overall readiness during 2015.

In FY 2015, “over half of home-station/non-deployed units report[ed] unacceptable levels of readiness.” This constitutes about 42 percent of the total USMC force. Personnel and equipment shortages, lower end strength, shorter dwell times, and a scarcity of prepositioned ships have inhibited sufficient training for home-station units and have “degraded full spectrum capability across the Service.”

Additionally, Marine aviation is experiencing significant readiness shortfalls. With a smaller force structure and fewer aircraft available for training, aviation units are having difficulty keeping up with demanding operational requirements. Stressed depots, affected by reduced procurement and workforce cuts, are contributing to readiness problems, leaving fewer aircraft available for training or operations. In total, approximately 19 percent of USMC aircraft are unavailable for use, according to Deputy Commandant for Aviation Lieutenant General Jon Davis. The aircraft affected are awaiting “long-term” repairs and spare parts, and their inability to participate in operations has been felt by the Corps.
immediately, as wiring problems kept heavy-lift aircraft from deploying to assist with earthquake relief efforts in Nepal, making it necessary to fill the void by deploying platforms that were less suited to the mission.\textsuperscript{297} In particular, some units, such as MV-22 and F/A-18 squadrons, are experiencing deployment ratios below 1:2, exacerbating readiness challenges.\textsuperscript{298}

In order to achieve the minimum readiness goal, squadrons must be qualified to perform 70 percent of their Mission Essential Tasks. Deployed squadrons are well-trained and well-resourced, next-to-deploy units, but frequently do not achieve the readiness goal until just before deployment, and non-deployed squadrons face “significant and unhealthy resource challenges” that degrade readiness.\textsuperscript{299}

The Marines’ Ground Equipment Reset Strategy has been progressing and is anticipated to be completed by the end of FY 2017. As of February 2015, all of the equipment in Afghanistan had been withdrawn, and 56 percent of the total reset requirement had been completed.\textsuperscript{300} Reconstituting equipment and ensuring that the Corps’ inventory can meet operational requirements are critical aspects of readiness.

### Scoring the U.S. Marine Corps

**Capacity Score: Weak**

Based on the deployment of Marines across major engagements since the Korean War, the Corps requires roughly 15 battalions for one MRC.\textsuperscript{301} Therefore, it would need a force of around 30 battalions to fight two MRCs simultaneously. The government force-sizing documents that discuss Marine Corps composition support this. Though the documents that make such a recommendation count the Marines by divisions, not battalions, they are consistent in arguing for three Active Marine Corps divisions, which in turn requires roughly 30 battalions. With a 20 percent strategic reserve, the ideal USMC capacity for a two-MRC force-sizing construct is 36 battalions.

More than 33,000 Marines were deployed in Korea, and over 44,000 were deployed in Vietnam. In the Persian Gulf, one of the largest Marine Corps missions in U.S. history, some 90,000 Marines were deployed, and around 66,000 were deployed for Operation Iraqi Freedom. As the Persian Gulf War is the most pertinent example for this construct, a force of 180,000 Marines is a reasonable benchmark for a two-MRC force, not counting Marines that would be unavailable for deployment (assigned to institutional portions of the Corps) or that are deployed elsewhere. This is supported by government documents, which have advocated for a force as low as 174,000 (1993 BUR) and as high as 202,000 (2010 QDR), with an average of end strength of 185,000 being recommended.

- **Two-MRC Level:** 36 battalions.
- **Actual 2015 Level:** 23 battalions.

The Corps is operating with slightly less than 64 percent of the number of battalions relative to the two-MRC benchmark. Its capacity is therefore scored as “weak.”

**Capability Score: Marginal**

The Corps received scores of “weak” for “Capability of Equipment,” “marginal” for “Age of Equipment” and “Health of Modernization Programs,” but “strong” for “Size of Modernization Program.” Therefore, the aggregate score for Marine Corps capability is “marginal.”

Excluded from the scoring are various ground vehicle programs that have been cancelled and are now being reprogrammed. This includes redesign of the ACV program and the MPC.

**Readiness Score: Marginal**

In FY 2015, 42 percent of the USMC experienced degraded readiness. As the nation’s crisis response force, the Corps requires that all units, whether deployed or non-deployed, be ready. Thus, this Index scores the Corps’ readiness as “marginal” because the USMC is meeting 58 percent of its readiness requirement.

**Overall U.S. Marine Corps Score: Marginal**

The Marine Corps is scored as “marginal” overall in the 2016 Index. This is the same as the assessment in the previous Index. However, the Corps is at the lower end of this category, and potential further declines in both capacity and readiness signal that this score could drop below “marginal” in the near future.
## U.S. Military Power: Marine Corps

<table>
<thead>
<tr>
<th></th>
<th>VERY WEAK</th>
<th>WEAK</th>
<th>MARGINAL</th>
<th>STRONG</th>
<th>VERY STRONG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capability</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Readiness</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OVERALL</strong></td>
<td></td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
</tr>
</tbody>
</table>