

# U.S. Army

**T**he U.S. Army is America's primary land warfare component. Although it addresses all types of operations across the range of ground force employment, its chief value to the nation is its ability to defeat and destroy enemy land forces in battle.

As is the case with the other services, the U.S. Army has sought ways to absorb the budget cuts driven by the Budget Control Act (BCA) of 2011 while still meeting the missions outlined in the 2012 Defense Strategic Guidance (DSG).<sup>1</sup> Fiscal challenges have strained the Army's ability to meet the national security requirements outlined in the DSG even as it has worked to find a proper balance among readiness, modernization, and end strength.<sup>2</sup> The Army has continued to reduce its end strength and accept greater risk to its modernization programs to preserve readiness levels—an even more challenging problem given that its proposed budget for fiscal year (FY) 2017 is \$1.4 billion lower than FY 2016 enacted levels.<sup>3</sup>

From a height of 566,000 in FY 2011, the Army's active duty end strength has shrunk to nearly 475,000 in FY 2016<sup>4</sup> on a path to 460,000 by the end of FY 2017.<sup>5</sup> These cuts are in line with the Army's accelerated troop reduction plan to arrive at an end strength of 450,000 in FY 2018—the minimum outlined in the DSG.<sup>6</sup> Although the Bipartisan Budget Act of 2015 provided a brief period of stability for the Department of Defense (DOD), funding levels continue to force the Army “to prioritize near-term operational requirements and readiness at the expense of end strength, sustainment and modernization.”<sup>7</sup>

If BCA-mandated budget caps return in FY 2018,<sup>8</sup> reduced funding levels and continued unpredictability wrought by short-term funding fixes such as continuing resolutions will result in further reductions in end strength and delays in modernization, threatening both capacity and capability.<sup>9</sup>

Operationally, the Army has approximately 190,000 soldiers forward stationed across 140 countries.<sup>10</sup> This is a significant increase from the previous year's level of 143,000 soldiers, a noteworthy contrast to the continued reduction in end strength signifying a smaller Army shouldering an increased workload.<sup>11</sup> This includes authorization for up to 9,800 troops that will be stationed in Afghanistan through 2016.<sup>12</sup> Despite past pledges to reduce troop levels in Afghanistan to 5,500 by the end of 2016, President Barack Obama recently announced that the U.S. will maintain 8,400 troops in Afghanistan into 2017.<sup>13</sup> Of the total number of U.S. forces deployed globally, “[t]he Army currently provides 40% of planned forces committed to global operations and over 60% of forces for emerging demands from Combatant Commanders.”<sup>14</sup>

## Capacity

In FY 2016, total Army end strength was 1,030,000 soldiers: 483,000 Active soldiers, 200,000 in the Army Reserve, and 348,000 in the Army National Guard.<sup>15</sup> In FY 2016, a portion of these personnel costs was paid through the Overseas Contingency Operations (OCO) budget function.<sup>16</sup> This is unlike FY 2015, when all soldiers in the Active Component were paid for in the base budget.

The Army also refers to its size in terms of brigade combat teams (BCTs). BCTs are the basic “building blocks” for employment of Army combat forces. They are normally employed within a larger framework of U.S. land operations but are sufficiently equipped and organized so that they can conduct independent operations as circumstances demand.<sup>17</sup> A BCT averages 4,500 soldiers in strength depending on its variant: Stryker, Armored, or Infantry. A Stryker BCT is a mechanized infantry force organized around the Stryker ground combat vehicle (GCV). Armored BCTs are the Army’s principal armored units and employ the Abrams main battle tank and the M2 Bradley fighting vehicle. An Infantry BCT is a highly maneuverable motorized unit.

The Army also has a separate air component organized into combat aviation brigades (CABs), which also can operate independently.<sup>18</sup> CABs are made up of Army rotorcraft, such as the AH-64 Apache, and perform various roles including attack, reconnaissance, and lift.

CABs and Stryker, Infantry, and Armored BCTs make up the Army’s main combat force, but they do not make up the entirety of the Army. About 90,000 troops form the Institutional Army and provide support, such as preparing and training troops for deployments and overseeing military schools and Army educational institutions.<sup>19</sup> The troops constituting the Institutional Army cannot be reduced at the same ratio as BCTs or CABs, and the Army plans to insulate these soldiers from drawdown and restructuring proposals in order to “retain a slightly more senior force in the Active Army to allow growth if needed.”<sup>20</sup> According to Army assessments a minimum of 87,400 active component soldiers in these forces is necessary to maintain the proposed 980,000 end strength for the total force.<sup>21</sup> In addition to the Institutional Army, a great number of functional or multi-functional support brigades (amounting to approximately 13 percent of the active component force based on historical averages)<sup>22</sup> provide air defense, engineering, explosive ordnance

disposal (EOD), military police, military intelligence, and medical support among other types of battlefield support for BCTs.

While end strength is a valuable metric in understanding Army capacity, counting BCTs is a more telling measure of actual hard-power capacity. In concert with the end strength reduction to approximately 475,000 soldiers,<sup>23</sup> the Active Army underwent brigade restructuring that decreased the number of BCTs from 38 to 31 in April 2016.<sup>24</sup> As a part of this reorganization, the Army also added a third maneuver battalion to its infantry and armored BCTs in FY 2015.<sup>25</sup> Additionally, all BCTs received additional engineer and fire support capabilities (additional 105mm and/or 155mm howitzers).<sup>26</sup> The FY 2017 budget will support the conversion of one Stryker BCT into an Infantry BCT.<sup>27</sup>

The Department of the Army’s FY 2016 budget requests supported a drawdown to 30 BCTs by the end of the fiscal year.<sup>28</sup> However, in February 2016, Army Chief of Staff General Mark Milley recommended delaying deactivation of the 4th Infantry BCT stationed in Alaska for at least one year in order to continue to provide rapid deployment capabilities and Arctic security.<sup>29</sup>

The Army’s aviation units also face near-term reductions. In May 2015, the Active Army deactivated the first of three combat aviation brigades and converted the 12th CAB into a headquarters element,<sup>30</sup> leaving only 11 CABs remaining in the active component.<sup>31</sup> In the conversion process, the 12th CAB shed five of its seven battalions, intending to augment the remaining battalions with rotational units.<sup>32</sup> The 3rd CAB is slated to be deactivated in FY 2019, which would leave only 10 in the Active Army.

It should be noted that the National Commission on the Future of the Army suggested in its 2016 report to Congress that maintaining an 11th CAB would leave the Army “better postured to retain a forward stationed aviation brigade in Korea” and would provide an advantage over rotational forces in maintaining aviation capability.<sup>33</sup>

The reduction in end strength in the past year has continued to have a disproportionate effect on BCTs. The Active Army has been downsized from 45 BCTs (552,100 soldiers) in FY 2013 to 31 BCTs<sup>34</sup> (475,000 soldiers) in FY 2016.<sup>35</sup> Thus, a 14 percent reduction in troop numbers resulted in a 31 percent reduction in BCTs. The proposed elimination of the 4th BCT in Alaska by the end of FY 2016 would have resulted in a 33 percent reduction in Active Army BCTs even as “demand for Army forces across Combatant Commands has increased by 23 percent during the same period.”<sup>36</sup> General Milley warned the Senate Armed Services Committee in March 2016 that at current end strength, “the Army risks consuming readiness as fast as we build it.”<sup>37</sup>

## Capability

The Army’s main combat platforms are ground vehicles and rotorcraft. The upgraded M1A2 Abrams and M2/M3 Bradley vehicles are primarily used in active component Armored BCTs, while reserve component ABCTs still rely on the earlier M1A1 variant.<sup>38</sup> Stryker BCTs, as one would expect, are equipped with Stryker vehicles. Infantry BCTs rely on the inventory of M113 armored personnel carriers (APCs). CABs are made up of Army helicopters including AH-64 Apaches, UH-60 Black Hawks, and CH-47 Chinooks.

Overall, the Army’s equipment inventory is relatively healthy. While some equipment has been worn down by usage in Afghanistan and Iraq, the Army has undertaken a “reset” initiative that is discussed below in the readiness section. The bulk of Army vehicles are young because of recent remanufacture programs for the Abrams and Bradley that have extended the service life of both vehicles beyond FY 2028.<sup>39</sup>

The Army has been methodically replacing the oldest variants of its rotorcraft and upgrading others that still have plenty of airframe service life. Today, the UH-60M, which is a newer version of the UH-60A, makes up approximately two-thirds of the total UH-60 inventory. Similarly, the CH-47F Chinook, a

rebuilt variant of the Army’s CH-47D heavy lift helicopter, is expected to extend the platform’s service life at least through 2038.<sup>40</sup> However, the current budget request for aircraft procurement stands at \$2.3 billion less than FY 2016 enacted levels.<sup>41</sup> The proposed budget will decelerate fleet modernization, potentially resulting in 24 fewer Black Hawks and nine fewer Apaches than previously planned for FY 2017.<sup>42</sup>

In addition to the viability of today’s equipment, the military must ensure the health of future programs. While future modernizing programs are not current hard-power capabilities that can be applied against an enemy force, they are a significant indicator of a service’s overall fitness for sustained combat operations: The service may be able to engage an enemy but be forced to do so with aging equipment and no program in place to maintain viability or endurance in sustained operations.

The U.S. military services are continually assessing how best to stay a step ahead of competitors: whether to modernize the force today with currently available technology or wait to see what their investments in research and development produce years down the road. Technologies mature and proliferate, becoming more accessible to a wider array of actors over time. U.S. forces will be challenged by state and non-state competitors that will leverage the latest developments in matériel, computing, platform sciences, and designs.

The Army is currently undertaking several modernization programs to replace or improve its ground combat vehicles and current rotorcraft fleet.<sup>43</sup> However, budget reductions levied in previous years have significantly affected modernization, with Research and Development, Acquisition, and Procurement accounts all experiencing 35 percent funding cuts between 2011 and 2015.<sup>44</sup> In fact, “[s]ince 2011 the Army has ended 20 programs, delayed 125 and restructured 124.”<sup>45</sup>

The Army’s most high-profile joint service Major Defense Acquisition Program (MDAP) is the Joint Light Tactical Vehicle (JLTV), a program shared with the Marine Corps.

Intended to combine the protection offered by Mine Resistant Ambush Protected Vehicles (MRAPs) with the mobility of the original unarmored High Mobility Multipurpose Wheeled Vehicle (HMMWV), the JLTV is a follow-on to the HMMWV (also known as the Humvee) and features design improvements that will increase its survivability against anti-armor weapons and improvised explosive device (IED) threats.

The Army plans to procure a total of 49,100 vehicles over the life of the program,<sup>46</sup> replacing only a portion of the current HMMWV fleet. The program is heavily focused on vehicle survivability and is not intended as a one-for-one replacement of the HMMWV.<sup>47</sup> In fact, the JLTV is intended to take on high-risk missions traditionally tasked to the HMMWV, to include scouting and troop transport in adverse environments, guerrilla ambushes, and artillery bombardment.<sup>48</sup> Several issues, including changed requirements and some technical obstacles in the early development phases, delayed the program from its originally intended schedule by about one year. In August 2015, the Army awarded Oshkosh a low-rate initial production (LRIP) contract for the JLTV,<sup>49</sup> with initial deliveries scheduled to begin in June 2016.<sup>50</sup> For the final year of LRIP in FY 2017, the Army plans to procure 1,828 JLTVs, which would bring the Army's JLTV order to a total of 2,690.<sup>51</sup> A full-rate production decision is expected in FY 2018.<sup>52</sup>

Other Army MDAPs of note in FY 2017 include the M1A2 Abrams, M2 Bradley, M109A6 Paladin 155mm Howitzers, and Stryker.<sup>53</sup> These platforms will undergo various structural modifications and upgrades that are needed to keep them ready to meet future contingencies.

The M1A2 is currently being enhanced with Vehicle Health Management and Power Train Improvement & Integration Optimization in order to upgrade the tank's reliability, durability, and fuel efficiency so that it can provide ground forces with superior battlefield firepower.<sup>54</sup> Similarly, the M109A6 is being outfitted with the Paladin Integrated

Management (PIM) program, which consists of a new drivetrain and suspension components, in order to sustain the platform's utility in combat through 2050.<sup>55</sup> Planned upgrades for the Stryker include improved survivability and lethality,<sup>56</sup> and a major Engineering Change Proposal (ECP) aimed at improving mechanical and electrical power, an enhanced chassis, and electronics network.<sup>57</sup>

The Army's rotorcraft modernization programs do not include any new platform designs. Instead, the Army is upgrading current rotorcraft to account for more advanced systems.

The Army's main modernization programs are not encumbered by any major problems, but there is concern about the future direction of Army capability. Fifteen years of sustained combat operations and limited resources has "limited the Army's ability to modernize for future fights."<sup>58</sup>

For example, cancellation of the Ground Combat Vehicle program raises the question of replacing the M2 Bradley. The Army awarded contracts to BAE Systems and General Dynamics Land Systems in May 2015 to begin work on design concepts for a Future Fighting Vehicle, a possible successor to the GCV.<sup>59</sup> Contract work is due to be completed in November 2016 and will help to inform the Army's decision to upgrade or entirely replace the Bradley.<sup>60</sup> However, "[t]here are currently no ground combat vehicle developmental programs."<sup>61</sup> At current funding levels, this could mean that "the Bradley and Abrams will be in the Army inventory for 50–70 years."<sup>62</sup> Updating the capability that the Bradley Infantry Fighting Vehicle provides remains a priority, and the Army is currently "refining concepts, requirements, and key technologies"<sup>63</sup> as part of a series of engineering change proposals, which will include suspension, engine, transmission, and lethality upgrades.<sup>64</sup>

The Army is also continuing development efforts for the Armored Multi-Purpose Vehicle (AMPV) to replace its 1960s-vintage M113 Armored Personnel Carrier.<sup>65</sup> The AMPV will

have five mission modules, including General Purpose, Medical Treatment, Medical Evacuation, Mortar Carrier, and Mission Command.<sup>66</sup> Because it is still in development<sup>67</sup> and is not expected to enter LRIP until FY 2020,<sup>68</sup> the AMPV is not yet an MDAP and is not included in this year's scoring.

## Readiness

As a result of sequestration in FY 2013, the Army experienced a shortage in readiness funding that resulted in “significantly and rapidly degraded Army readiness,” which the Secretary of the Army and the Army Chief of Staff testified would “translate directly into FY 14 and beyond.”<sup>69</sup> Although a higher level of funding in FY 2015 and FY 2016 provided two years of stability and modest budget relief, funding levels have not kept pace with the growing threat environment, including an FY 2017 base budget request that is \$1.4 billion less than FY 2016 enacted levels.<sup>70</sup> As a result, the Army has chosen to “protect current readiness at the expense of future modernization and end strength.”<sup>71</sup> Army Vice Chief of Staff General Daniel Allyn explained that:

To build readiness...the Army reduced key installation services, individual training programs, and modernization to a level that impacts future readiness and quality of life. In addition to the effects on Soldier quality of life, these cuts force Commanders to divert Soldiers from training to perform life-support tasks.<sup>72</sup>

Recognizing the risk that degraded readiness introduces into its ability to respond to an emergent threat, the Army continues to prioritize operational readiness over other expenditures for FY 2017.<sup>73</sup> A return to “full spectrum combat readiness” will require sustained investment for a number of years. As a result of years of high operational tempos and sustained budget cuts, the Army is not expected to return to sufficient readiness levels until FY 2020.<sup>74</sup>

This tiered readiness strategy means that only a limited number of BCTs are available and ready for decisive action. Accordingly,

the tiered readiness model employed by the Army has resulted in approximately one-third of the 31 Active BCTs being ready for contingency operations in FY 2016.<sup>75</sup> This is an improvement from early in 2014 when 80 percent of the Army was considered to be “at a lower readiness level.”<sup>76</sup> As stated, the Army had prioritized funding in readiness over capacity and modernization, allowing it to regain some of the readiness lost as a result of sequestration the prior year.

The Army uses Combat Training Centers (CTCs) to train its forces to desired levels of proficiency. Specifically, the mission of the CTC Program is to “provide realistic Joint and combined arms training” to approximate actual combat and increase “unit readiness for deployment and warfighting.”<sup>77</sup> The Army financed 19 CTC rotations in FY 2016 and is expected to maintain the same number of rotations in FY 2017.<sup>78</sup> Although utilizing CTCs continues to be a priority for the Army,<sup>79</sup> resource constraints have limited investment in readiness.

The Army may already be experiencing the effect of reduced training hours. Army Aviation reported five major accidents in the first two quarters of FY 2016 that it determined to be a result of human error.<sup>80</sup> While human error cannot be entirely eliminated, the Army has found that “[t]he most effective means of reducing human error is aggressive and realistic training that increases repetition and grows confidence and competence in the individual and collective team.”<sup>81</sup>

Aviation maintenance personnel are similarly starving for opportunities “to gain experience or maintain proficiency in their Military Occupational Specialty.”<sup>82</sup> In order to stay within presidentially authorized end strengths in Afghanistan while at the same time maximizing combat capability, most maintenance personnel have been left behind as aircrew and aircraft have deployed. Instead, deployed forces have relied primarily on contractors to meet maintenance requirements, leaving Army maintenance personnel to perform only minor tasks.<sup>83</sup>



In FY 2015, the Army supported the Army Contingency Force (ACF) initiative that is developing “a contingency response force which provides Combatant Commanders an initial response capability that can achieve early objectives for most contingency plans.”<sup>84</sup> Under the ACF model, the Army maintains readiness for only 20 of the 60 total BCTs maintained by the Active, National Guard, and Reserve Components. Of those 20 that are considered ready, 11 are committed to ongoing missions, “leaving only nine to provide strategic flexibility for unforecasted contingencies.”<sup>85</sup> The other 40 BCTs maintained by the Total Army are limited to “minimum Individual/Crew/Squad resourcing levels through sufficient Training Support Systems.”<sup>86</sup> The aforementioned numbers can be misleading, as the Active Component maintains a total of only 31 BCTs and realistically maintains only about 30 percent of them at acceptable levels of combat readiness.<sup>87</sup>

Another key factor in readiness is sustainment of equipment. At the most basic level, a unit’s equipment must work when the unit is deployed. As a result of extensive combat usage in Afghanistan and the lingering effects of

nearly a decade of combat operations in Iraq, the Army has continued with its reset program to restore used equipment to desired capability or to replace worn-out equipment for use in future engagements. The Army estimates that it will require three years of reset funding “after the last piece of equipment has been retrograded from the combatant command theater of operations.”<sup>88</sup> It also anticipates that the timeline for reset requirements will continue into FY 2020 for equipment retrograded from Afghanistan.<sup>89</sup>

Reduced funding throughout FY 2013, a consequence of sequestration, forced the Army to postpone the reset of several pieces of equipment. Operations and maintenance funding for FY 2017 supports the repair and restoration of “30,000 battle damaged items including aircraft, aviation support equipment, artillery and missile, communication equipment, individual and crew served weapons, tactical wheeled vehicles, and general support equipment.”<sup>90</sup> If the necessary funding is again reduced by the BCA, the Army’s efforts to recover from recent operations and prepare for the future will be further stymied.

## Scoring the U.S. Army

### Capacity Score: Weak

Historical evidence shows that, on average, the Army needs 21 brigade combat teams to fight one major regional conflict. Based on a conversion of roughly 3.5 BCTs per division, the Army deployed 21 BCTs in Korea, 25 in Vietnam, 14 in the Persian Gulf War, and around four in Operation Iraqi Freedom—an average of 16 BCTs (or 21 if the much smaller Operation Iraqi Freedom initial invasion operation is excluded). In the 2010 Quadrennial Defense Review, the Obama Administration recommended a force capable of deploying 45 active BCTs. Previous government force-sizing documents discuss Army force structure in terms of divisions; they consistently advocate for 10–11 divisions, which equates to roughly 37 active BCTs.

Considering the varying recommendations of 35–45 BCTs and the actual experience of nearly 21 BCTs deployed per major engagement, 42 BCTs would be needed to fight two MRCs.<sup>91</sup> Taking into account the need for a strategic reserve, the Active Army force should also include an additional 20 percent of the 42 BCTs.

- **Two-MRC Benchmark:** 50 brigade combat teams.
- **Actual 2016 Level:** 31 brigade combat teams.

The Army’s current Active Component BCT capacity meets 64 percent of the two-MRC benchmark and thus is scored as “weak.”

Capability Score: Marginal

The Army’s aggregate capability score remains “marginal.” While the Army will continue to pursue a model of tiered readiness with the aim of improving, if only slightly, troop readiness levels in FY 2015 over the previous year, the service’s overall capability score remains static due to continued reductions in end strength that degrade capability. Additionally, in spite of progress with the JLTV and AMPV, budget reductions and continuing resolutions have led to inadequate and short-sighted funding for the development of future modernization programs, negatively affecting platform innovation and modernization. These subsequent reductions have set back the Army’s development of future capabilities needed to remain dominant in any operational environment.

This aggregate score is a result of “marginal” scores for “Age of Equipment,” “Size of Modernization Programs,” and “Health of Modernization Programs.” The Army scored “weak” for “Capability of Equipment.”

Readiness Score: Weak

Just over a third of Active BCTs were ready for action according to official Army

testimony by the Chief of Staff in April 2016.<sup>92</sup> The Army had 32 BCTs; therefore, roughly 11 of the Active Army BCTs were considered ready for combat. For that reason, this *Index* assesses Army readiness as “weak.” However, it should be noted that the Vice Chief of Staff also reported in March that of the BCTs fully trained for “decisive action operations,” the readiness of nine had been consumed in support of ongoing operations, which means that only three were uncommitted and ready for use.<sup>93</sup> With this in mind, *actual* readiness is therefore likely dangerously close to nearing a state of “very weak.”

Overall U.S. Army Score: Weak

The Army’s overall score is calculated based on an unweighted average of its capacity, capability, and readiness scores. The average score was 2.3; thus, the overall Army score is “weak.” This was derived from the aggregate score for capacity (“weak”); capability (“marginal”); and readiness (“weak”). This score is the same as the score in the *2016 Index* and indicates continued concerns for the Army, particularly when it comes to capacity in light of increased demand on the service around the globe.

U.S. Military Power: Army

	VERY WEAK	WEAK	MARGINAL	STRONG	VERY STRONG
Capacity		✓			
Capability			✓		
Readiness		✓			
OVERALL		✓			

## Endnotes:

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