

# U.S. Army

The 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.

Secretary of Defense James Mattis has warned that a decade of combat operations and a lack of reliable and predictable funds have left the U.S. military in "a position where we are losing or eroding our competitive edge."<sup>1</sup> Fiscal challenges have similarly strained the ability of the Army to meet the national security requirements outlined in the Defense Planning Guidance as it works to balance readiness, modernization, and end strength.

Secretary of the Army Mark Esper and Army Chief of Staff General Mark Milley have testified that "strong support" from Congress "has enabled the Army to halt the decline in our warfighting readiness,"<sup>2</sup> but despite the inclusion of additional Army end strength in the 2018 National Defense Authorization Act (NDAA) and increased funding in the omnibus Consolidated Appropriations Act, 2018, issues of inadequate size, readiness, modernization, and high operational tempo remain to be addressed.

- General Milley has testified that the Army is too small and needs to grow to "north of 500,000...in the regular Army" to accomplish the missions outlined in the National Security and Defense Strategies.<sup>3</sup>
- Secretary Esper and General Milley have further testified that the Army "can no

longer afford to delay modernization without risking overmatch on future battlefields."<sup>4</sup>

- Although the Army's internal goal is to have 66 percent of its brigade combat teams considered ready at any given time, the number considered ready today is only "in the range of the 50 percent mark."<sup>5</sup> (This is an improvement over 2017 when only one-third were considered ready.<sup>6</sup>)
- Of the 15 of 31 Active BCTs considered "ready," only eight are considered "fully ready,"<sup>7</sup> which limits options for the President. According to Vice Chief of Staff General Daniel Allyn, the Army considers a unit fully ready if it "needs no additional people, no additional training, and no additional equipment."<sup>8</sup>

In fiscal year (FY) 2018, the Army's authorized active-duty end strength was 483,500, down from 566,000 as recently as FY 2011.<sup>9</sup> The Obama Administration had planned to cut Active Army end strength further still to 450,000 by 2018,<sup>10</sup> but President Trump's election forestalled those cuts. Although the Bipartisan Budget Act of 2018 has provided a period of stability in 2018–2019 for the Department of Defense (DOD), unless Congress acts, the return of the Budget Control Act (BCA) in 2020 and beyond will serve to reverse recent hard-fought gains in readiness.<sup>11</sup> Army leaders have testified that if BCA-mandated budget caps return in FY 2020, the Army will be able to conduct at best platoon-level training and

that “squad and platoon training an Army does not make.”<sup>12</sup>

Operationally, the Army has approximately 178,000 soldiers forward stationed across 140 countries. Of the total number of U.S. forces deployed globally, according to Army Deputy Chief of Staff Lieutenant General Joseph Anderson, “[t]he U.S. Army currently fills 50 percent of Combatant Command base force demand and 70 percent of emergent force demand,”<sup>13</sup> which highlights the oversized role that the Army plays in the nation’s defense.

### Capacity

The 2018 NDAA increased Army authorized end strength to 1,026,500 soldiers: 483,500 in the Regular Army, 199,500 in the Army Reserve, and 343,500 in the Army National Guard, reversing years of reductions.<sup>14</sup> As noted, General Milley has testified that the Army is too small for the missions it has been assigned and that the Army is “shooting to get north of 500,000...in the regular Army.”<sup>15</sup> He has previously testified that he believes that the Active Army should number from 540,000 to 550,000, the Army National Guard from 350,000 to 355,000, and the Army Reserve from 205,000 to 209,000.<sup>16</sup>

The Army normally refers to its capacity in terms of brigade combat teams. BCTs are the basic building blocks for employment of Army combat forces. They are usually employed within a larger framework of U.S. land operations but are equipped and organized so that they can conduct independent operations as circumstances demand.<sup>17</sup> A BCT averages 4,500 soldiers depending on its variant: Stryker, Armored, or Infantry. A Stryker BCT is a mechanized infantry force organized around the Stryker combat vehicle. Armored BCTs are the Army’s primary armored units and principally employ the M1 Abrams main battle tank and the M2 Bradley fighting vehicle. An Infantry BCT is a highly maneuverable motorized unit. Variants of the Infantry BCT are the Airmobile BCT (optimized for helicopter assault) and the Airborne BCT (optimized for parachute forcible entry operations).

The Army also has a separate air component organized into combat aviation brigades (CABs), which 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 forces, but they do not make up the entirety of the Army. About 90,000 troops form the Institutional Army and provide such forms of support as preparing and training troops for deployments, carrying out key logistics tasks, and overseeing military schools and Army educational institutions. The troops constituting the Institutional Army cannot be reduced at the same ratio as BCTs or CABs, and the Army endeavors to insulate these soldiers from draw-down and restructuring proposals in order to “retain a slightly more senior force in the Active Army to allow growth if needed.”<sup>19</sup> In addition to the Institutional Army, a great number of functional or multifunctional support brigades (amounting to approximately 13 percent of the active component force based on historical averages<sup>20</sup>) provide air defense; engineering; explosive ordnance disposal (EOD); chemical/biological/radiological and nuclear protection; 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, the number of BCTs is a more telling measure of actual hard power. In preparation for the reduction of its end strength to 460,000, the planned level for FY 2017,<sup>21</sup> the Active Army underwent brigade restructuring that decreased the number of BCTs from 38 to 31. When Congress reversed the reduction in end strength and authorized growth starting in 2017 and reaching an active-duty level of 483,500 for 2018, instead of “re-growing” BCTs, the Army chose primarily to “thicken” the force and raise the manning levels within the individual BCTs to increase unit readiness.<sup>22</sup> The Army recently reported that 21 of its 31 BCTs are now manned at 100 percent.<sup>23</sup>

The 2015 NDAA established a National Commission on the Future of the Army to conduct a comprehensive study of Army structure. To meet the threat posed by a resurgent Russia and others, the commission recommended that the Army increase its numbers of Armored BCTs.<sup>24</sup> The Army converted one Infantry BCT to Armored in 2018, and the FY 2019 budget supports the conversion of another Infantry BCT to Armored, marking the creation of the Army's 16th Armored BCT.<sup>25</sup>

In 2017, in a major initiative personally shepherded by General Milley, the Army established the first of six planned Security Force Assistance Brigades (SFABs). These units, composed of about 530 personnel each, are designed specifically to train, advise, and mentor other partner-nation military units. The Army had been using regular BCTs for this mission, but because train-and-assist missions typically require senior officers and noncommissioned officers, a BCT comprised predominantly of junior soldiers is a poor fit. The Army envisions that these SFABs will be able to reduce the stress on the service.<sup>26</sup> The Army activated its second SFAB in January 2018 at Fort Bragg, North Carolina. It also plans to activate a third Regular Army and first National Guard unit later in 2018 and the final two SFABs in 2019. The first SFAB is currently in Afghanistan.<sup>27</sup>

The number of Army aviation units also has been reduced. In May 2015, the Army deactivated one of its 12 Combat Aviation Brigades (CABs),<sup>28</sup> leaving only 11 in the Regular Army.<sup>29</sup>

The reductions in end strength since 2011 have had a disproportionate effect on BCTs. Authorized end strength for the Active Army has decreased from 45 BCTs (552,100 soldiers) in FY 2013 to 31 BCTs (483,500 soldiers) in FY 2019.<sup>30</sup> Put another way, a 14 percent reduction in troop numbers has led to a 31 percent reduction in BCTs.

In addition to the increased strategic risk, the result of fewer BCTs and a reduced Army end strength, combined with an undiminished daily global demand, has been a sustained level of operational tempo (OPTEMPO). Despite a reduction in large unit deployments,

particularly to Iraq and Afghanistan, Army units continue to experience sustained demand. General Robert Abrams, Commander of Army Forces Command, recently put it bluntly: “[T]he deployment tempo has not slowed down.” Recent Army Forces Command data reflect that division headquarters are deploying every 14 to 16 months, Armored Brigade Combat Teams every 15 months, and Stryker and Infantry BCTs every 12–14 months.<sup>31</sup>

Included in these deployments are the rotations of Armored BCTs to and from Europe and Korea. Rather than relying on forward-stationed BCTs, the Army now rotates Armored BCTs to Europe and Korea on a “heel-to-toe” basis. There is an ongoing debate whether the rotational BCT or the forward-stationed BCT represents the best option. Proponents of rotational BCTs argue that the BCTs arrive fully trained and remain at a high state of readiness throughout a typical nine-month overseas rotation; those who favor forward-stationed forces point to a lower cost, forces that typically are more familiar with the operating environment, and a more reassuring presence for our allies.<sup>32</sup>

In the past 24 months, the Army has made a deliberate decision to increase the integration and readiness of select Army National Guard and Reserve formations so that they can be employed more easily when needed. In March 2016, the Army initiated an Associated Units pilot program to link select Regular Army and Reserve component units. As one such example, Georgia's National Guard 48th Infantry BCT was associated with the Regular Army's 3rd Infantry Division at Fort Stewart, Georgia. Twenty-seven units across the country are participating in the pilot program, which will be evaluated in March 2019 to determine whether it should be made permanent.<sup>33</sup>

Additionally, the Army is resourcing select Army National Guard BCTs and other units with additional numbers of training days, moving from the standard number of 39 training days to as many as 63 per year to increase readiness levels. Under a concept called “Army National Guard 4.0,” the National Guard is implementing a multi-year training cycle to build

readiness over time. As part of this concept, the Army has increased the number of Army Reserve/National Guard (ARNG) BCTs participating in a Combat Training Center (CTC) rotation from two to four starting in FY 2019.<sup>34</sup>

As a result of this change in strategy and the increased investment in the National Guard, the 2019 *Index of U.S. Military Strength* counts four ARNG BCTs in the overall Army BCT capacity count, reflecting their ability to be employed on a dramatically shortened timeline as a result of their training at a Combat Training Center and the increased number of training days.

### Capability

The Army's main combat platforms are ground vehicles and rotorcraft. The Abrams Main Battle Tank (latest version: M1A2 SEPv3, service entry date 2017) and Bradley Fighting Vehicle (latest version: M2A4, service entry date 2012) are found primarily in Armored BCTs.<sup>35</sup> Also in Armored BCTs, the venerable M113 personnel carrier is scheduled to be replaced by the new Armored Multi-Purpose Vehicle (AMPV), which is entering its late testing phase.<sup>36</sup> Stryker BCTs are equipped with Stryker vehicles. In response to an Operational Needs Statement, the Stryker BCT in Europe is receiving Strykers fitted with a 30mm cannon to provide an improved anti-armor capability. Fielding began in 2017.<sup>37</sup> Infantry BCTs have fewer vehicles and rely on lighter platforms such as trucks and High Mobility Multipurpose Wheeled Vehicles (HMMWVs) for mobility. Airborne BCTs are scheduled to receive a new platform, the Ground Mobility Vehicle (GMV), starting in 2019 to increase their speed and mobility.<sup>38</sup> Finally, CABs are composed of Army helicopters including AH-64 Apaches, UH-60 Black Hawks, and CH-47 Chinooks.

Overall, the Army's equipment inventory, while increasingly dated, is well maintained. Despite high usage in Afghanistan and Iraq, because the Army deliberately undertook a "reset" plan, most Army vehicles are relatively "young" because recent remanufacture programs for the Abrams and Bradley vehicles have extended the service life of both vehicles beyond FY 2028.<sup>39</sup>

While the current equipment is well maintained and has received several incremental upgrades, Abrams and Bradley fighting vehicles first entered service in the early 1980s, making them 38 years old in many cases.

The Army has also been methodically upgrading the oldest variants of its rotorcraft. Today, the UH-60M, the newest version of the UH-60, 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 "remain the Army's heavy lift helicopter for the next several decades."<sup>40</sup> Despite major plus-ups to Army procurement in 2019, the 2019 budget request for aircraft procurement, at \$2.8 billion,<sup>41</sup> is \$172 million less than the FY 2018 President's budget, reflecting that the Army has beefed up procurement programs other than aviation.

In addition to the viability of today's equipment, the military must ensure the health of future programs. Although future modernizing programs are not current hard-power capabilities that can be applied against an enemy force today, they are a significant indicator of a service's overall fitness for future 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 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.

After years of a singular focus on counterinsurgency due to the wars in Iraq and Afghanistan, followed by a concentration on the readiness of the force, the Army is now playing catch-up in the area of equipment modernization. Army leaders have testified that "a combination of strategic, technological, institutional, and budgetary trends places at risk the Army's

competitive edge over near-peer competitors in the next fight.”<sup>42</sup>

Secretary of the Army Mark Esper has established a new four-star headquarters, Army Futures Command, to manage modernization. It achieved initial operating capability (IOC) in the summer of 2018.<sup>43</sup> Additionally, the Army has established eight cross-functional teams (CFTs) to better manage its top modernization priorities.<sup>44</sup> Army leadership, in particular the Under Secretary and Vice Chief of Staff of the Army, are said to be devoting an extraordinary amount of time to issues of equipment modernization, but only time will tell whether the new structures, commands, and emphasis will result in long-term improvement in modernization posture. When asked to summarize the situation with respect to Army modernization in November 2016, Major General Eric Wesley, Commanding General, U.S. Army Maneuver Center of Excellence, repeated an assessment that “of 10 major capabilities that we use for warfighting, by the year 2030, Russia will have exceeded our capacity in six, we will have parity in three, and the United States will dominate in one.”<sup>45</sup> This assessment has not materially changed since then.

The anemic nature of the Army’s modernization program is best illustrated by the fact that its highest-profile Major Defense Acquisition Program (MDAP) is a *truck* program, the Joint Light Tactical Vehicle (JLTV). Intended to combine the protection offered by Mine Resistant Ambush Protected Vehicles (MRAPs) with the mobility of the original unarmored 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 devices (IEDs). The Army plans to procure 49,099 vehicles over the life of the program, 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. 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>46</sup>

FY 2019 Base Procurement of \$1.3 billion supports 3,390 JLTVs of various configurations to fulfill the requirements of multiple mission roles and minimize ownership costs for the Army’s Light Tactical Vehicle fleet.<sup>47</sup>

Other notable Army procurements requested in the FY 2019 budget include the M1A2 Abrams SEPv3 upgrade (135); M2 Bradley modifications (210); M109A6 Paladin 155mm Howitzers (Paladin Integrated Management) (36); and munitions including the Guided Multiple Launch Rocket System (GMLRS) (9,450) and a large number of 155mm artillery projectiles (148,287).<sup>48</sup>

Similar to the rest of their modernization programs, 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 currently encumbered by any major problems, but there is justifiable concern about the lack of new development programs underway. “The Army is engaged in a protracted struggle to out-innovate future competitors,” in the words of the two senior Army officers directly responsible for equipment modernization, “and right now, we are not postured for success. If the Army does not modernize its force to expand and maintain overmatch, we face the potential of being out-matched in high-end conventional combat.”<sup>49</sup>

## Readiness

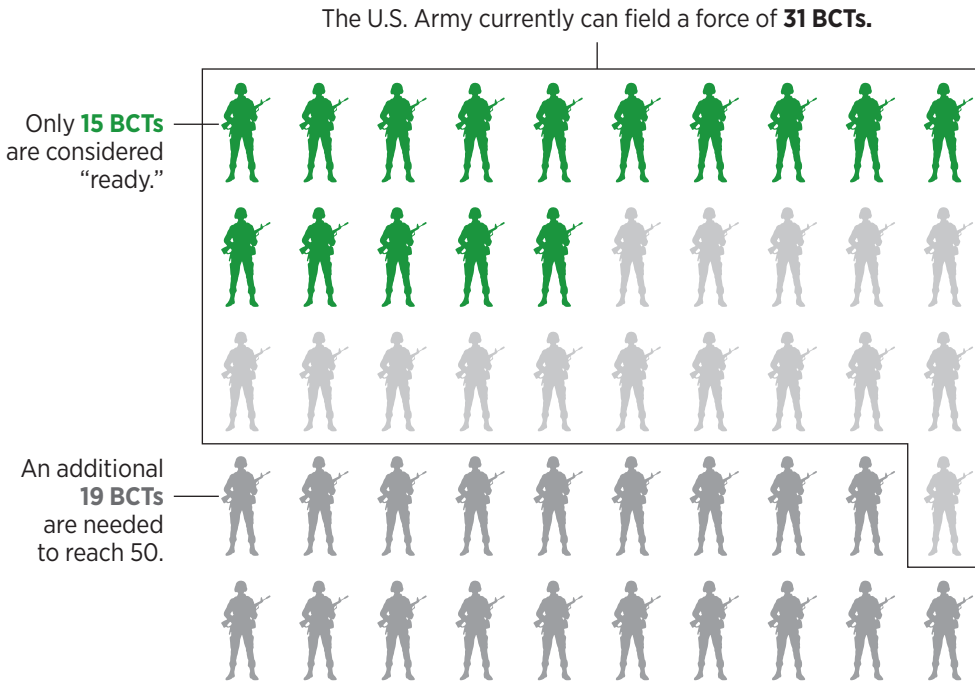
The combined effects of the Budget Control Act of 2011, the unrelenting global demand for forces, and reductions in end strength have caused Army readiness to decline to the point where only half of Active Army BCTs are now considered “ready” and only eight are considered “fully ready.”<sup>50</sup> The Chief of Staff of the Army has testified that the Army’s goal is to have two-thirds of Active Army BCTs ready.<sup>51</sup>

As part of the \$700 billion provided for defense in the 2018 omnibus appropriations bill,

FIGURE 1

## Army Readiness: Brigade Combat Teams

Based on historical force requirements, Heritage experts assess that the Army needs a total of 50 Brigade Combat Teams (BCTs). In addition to active-duty forces, the Army National Guard has four BCTs that operate at a high level of readiness.



**SOURCES:** *Congressional Quarterly*, "House Armed Services Committee Holds Hearing on the State of the Military," CQ Congressional Transcripts, February 7, 2017, <https://plus.cq.com/doc/congressionaltranscripts-5036905?7> (accessed May 23, 2018), and Heritage Foundation research.

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Congress provided much-needed relief to the Army by appropriating approximately \$164 billion. Combined with the total increase of 12,334 soldiers in all components of Army end strength authorized in the 2018 NDAA, this provided critical resources needed to rebuild Army readiness.

In the FY 2019 budget request, training activities are relatively well resourced. When measuring training resourcing, the Army uses training miles and flying hours, which reflect the number of miles that formations are resourced to drive their primary vehicles and

aviators can fly their helicopters.<sup>52</sup> According to the Department of the Army's budget justification exhibits, "[t]he FY 2019 budget funds 1,279 annual Operating Tempo Full Spectrum Training Miles and 10.8 flying hours per crew, per month for an expected overall training proficiency of BCT(-)."<sup>53</sup> These are higher than resourced levels of 1,188 miles and 10.6 hours in FY 2018.<sup>54</sup>

Nonetheless, structural readiness problems summarized by too small a force attempting to satisfy too many global presence requirements and Operations Plan (OPLAN) warfighting

requirements have led to a force that is both unable to achieve all required training events and overly stressed. As a result, the Army reports that “[d]espite increased funding in 2017 and 2018, the Army remains at high military risk of not meeting the demands of current operations while also responding to two near-simultaneous contingencies.”<sup>55</sup> As a result of years of high operational tempos and sustained budget cuts, the Army now does not expect to return to desired levels of “full spectrum readiness” until 2022.<sup>56</sup>

These reduced levels of readiness mean that only a select number of BCTs are available and ready for decisive action. As a function of resources, time, and available force structure, this has resulted in approximately one-half of the 31 Active BCTs being ready for contingency operations in FY 2018 compared to a desired readiness level of two-thirds, although this is still an improvement over 2017, when only one-third of the Active BCTs were judged “ready.”<sup>57</sup>

As part of its new Sustainable Readiness Model (SRM),<sup>58</sup> the Army uses Combat Training Centers (CTCs) to train its forces to desired levels of proficiency. Specifically, the CTC program’s mission is to “provide realistic Joint and combined arms training” to approximate actual combat and increase “unit readiness for deployment and warfighting.”<sup>59</sup> The Army requested resources for 20 CTC rotations in FY 2019, including four for the Army National

Guard.<sup>60</sup> Another change in the Army’s training model involves the implementation of a system of Objective T metrics that seeks to remove the subjectivity behind unit commander evaluations of training. Under the Objective T program, the requirements that must be met for a unit to be assessed as fully ready for combat are to be made clear and quantitative.<sup>61</sup>

The ongoing challenge for the Army remains a serious one: Despite increased levels of funding for training and modernization, if the size of the Army remains the same and global demand does not diminish, the Army risks consuming readiness as fast as it builds it, which means that the date by which Army leaders hope to regain full spectrum readiness (2022) could continue to be pushed back, prolonging strategic risk for the nation.

Another key factor in readiness is available quantities of munitions. The Army’s chief logistician, Lieutenant General Aundre Piggee, Deputy Chief of Staff, G-4, testified in 2017 about shortages of “preferred munitions—Patriot, THAAD, Hellfire and our Excalibur which are howitzer munitions,” adding that “if we had to surge, if we had a contingency operation, and if there...continue to be emerging threats which we see around the world, I am very concerned with our current stockage of munitions.”<sup>62</sup> These shortages have persisted into 2018.

## 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, our assessment is that 42 BCTs would be needed to fight two MRCs.<sup>63</sup> Taking into account the need for a strategic reserve, the Army force should also include an additional 20 percent of the 42 BCTs.

Because of the investment the Army has made in National Guard readiness, this *Index* counts four additional ARNG BCTs in the Army’s overall BCT count, giving them 35 (31 Regular Army plus four ARNG), but 35 is still not enough to meet the two-MRC construct. The service’s overall capability score therefore remains unchanged from 2018.

- **Two-MRC Benchmark:** 50 brigade combat teams.
- **Actual 2018 Level:** 35 (31 active + four ARNG) brigade combat teams.

The Army’s current BCT capacity meets 70 percent of the two-MRC benchmark and thus is scored as “weak.”

**Capability Score: Marginal**

The Army’s aggregate capability score remains “marginal.” This aggregate score is a result of “marginal” scores for “Age of Equipment,” “Size of Modernization Programs,” and “Health of Modernization Programs.” More detail on these programs can be found in the equipment appendix following this section. The Army scored “weak” for “Capability of Equipment.”

In spite of modest progress with the JLTV and AMPV, and in spite of promising developments in the form of announcements regarding Army Futures Command, CFTs, and new modernization priorities, Army equipment programs are largely still in the planning stage

and have not entered procurement phases and thus are not yet replacing legacy platforms. These planned procurements are highly sensitive to any turbulence or reduction in funding.

**Readiness Score: Strong**

About half of Active BCTs were ready according to the Army Chief of Staff in April 2018.<sup>64</sup> The Army has 31 Active BCTs; therefore, roughly 15 of the Active Army BCTs were considered ready. The Army’s internal requirement for Active BCT readiness is 66 percent, or 20.5 BCTs ready. Using the assessment methods of this *Index*, this results in a percentage of service requirement of 73 percent, or “strong.” However, it should be noted that Lieutenant General Joseph Anderson, the Army Operations Officer, also reported in April 2018 that of the 15 BCTs considered “ready,” only eight were considered “fully ready,” meaning that they needed no additional training, personnel or equipment.<sup>65</sup>

**Overall U.S. Army Score: Marginal**

The Army’s overall score is calculated based on an unweighted average of its capacity, capability, and readiness scores. The average score was 3; thus, the overall Army score is “marginal.” This was derived from the aggregate score for capacity (“weak”); capability (“marginal”); and readiness (“strong”). This score is an increase over the assessment of the 2018 *Index*, which rated the Army as “weak.” The increase was driven by increased BCT readiness.

**U.S. Military Power: Army**

	VERY WEAK	WEAK	MARGINAL	STRONG	VERY STRONG
Capacity		✓			
Capability			✓		
Readiness				✓	
<b>OVERALL</b>			✓		



# ARMY SCORES



Procurement and Spending ■ Through FY 2018 ■ Pending

## Main Battle Tank

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>M1A1/2 Abrams</b></p> <p>Inventory: <b>775/1,609</b> Fleet age: <b>28/7.5</b> Date: <b>1980</b></p> <p>The Abrams is the main battle tank used by the Army in its armored brigade combat teams (BCTs). The Abrams went through a remanufacture program to extend its life to 2045.</p>	4	4	<p><b>Next Generation Combat Vehicles (NGCV)</b></p> <p>The NGCV program is intended to replace the Bradley fighting vehicle and the Abrams tank, and is number two among the Army's "Big Six" modernization priorities.</p>		

## Infantry Fighting Vehicle

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>M2 Bradley</b></p> <p>Inventory: <b>6,547</b> Fleet age: <b>13</b> Date: <b>1981</b></p> <p>The Bradley is a tracked infantry fighting vehicle (IFV) meant to transport infantry and provide covering fire. The Bradley complements the Abrams tank in armored BCTs. Originally intended to be replaced by the Ground Combat Vehicle (now canceled), the Bradley underwent a remanufacture program to extend the life of the platform. The Army plans to keep the Bradley in service until 2045.</p>	4	2	<p><b>Next Generation Combat Vehicles (NGCV)</b></p> <p>The NGCV program is intended to replace the Bradley fighting vehicle and the Abrams tank, and is number two among the Army's "Big Six" modernization priorities.</p>		

## Armored Fighting Vehicle

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>Stryker</b></p> <p>Inventory: <b>3,892</b> Fleet age: <b>12</b> Date: <b>2002</b></p> <p>The Stryker is a wheeled armored fighting vehicle that makes up the Stryker BCTs. The program was considered an interim vehicle to serve until the arrival of the Future Combat System (FCS), but that program was cancelled due to technology and cost hurdles. The Stryker is undergoing modifications to receive a double-v hull (DVH) to increase survivability. The Stryker is expected to remain in service for 30 years.</p>	4	3	None		

See Methodology for descriptions of scores. Fleet age—Average age of fleet Date—Year fleet first entered service

# ARMY SCORES



Procurement and Spending ■ Through FY 2018 ■ Pending

## Armored Personnel Carrier

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>M113 Armored Personnel Carrier</b></p> <p>Inventory: <b>3,000</b> Fleet age: <b>19</b> Date: <b>1960</b></p> <p>The M113 is a tracked APC that plays a supporting role for armored BCTs and infantry BCTs. The APC was also to be replaced by the GCV. Plans are to use the platform until 2045.</p>	3	1	<p><b>Armored Multi-Purpose Vehicle (AMPV)</b></p> <p>Timeline: <b>2018–2035</b></p> <p>The AMPV will be adapted from an existing vehicle design which allowed the program to bypass the technology development phase. Initial operation capability is not expected until 2022.</p>	2	5
			<p><b>PROCUREMENT</b></p>	<p><b>SPENDING (\$ millions)</b></p>	

## Light Wheeled Vehicle

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>HMMWV</b></p> <p>Inventory: <b>150,000</b> Fleet age: <b>10.5</b> Date: <b>1985</b></p> <p>The HMMWV is a light wheeled vehicle used to transport troops under some level of protection. The expected life span of the HMMWV is 15 years. Some HMMWVs will be replaced by the Joint Light Tactical Vehicle (JLTV).</p>	2	1	<p><b>Joint Light Tactical Vehicle (JLTV)</b></p> <p>Timeline: <b>2015–2036</b></p> <p>Currently in development, the JLTV is a vehicle program meant to replace some of the HMMWVs and improve reliability and survivability of vehicles. So far the program has experienced a one-year delay due to changes in vehicle requirements. This is a joint program with USMC. IOC is anticipated at the end of 2019 for the Army.</p>	1	4
			<p><b>PROCUREMENT</b></p>	<p><b>SPENDING (\$ millions)</b></p>	

See Methodology for descriptions of scores. Fleet age—Average age of fleet Date—Year fleet first entered service

# ARMY SCORES



Procurement and Spending ■ Through FY 2018 ■ Pending

## Attack Helicopter

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>AH-64 D Apache</b></p> <p>Inventory: <b>400</b> Fleet age: <b>13</b> Date: <b>1984</b></p> <p>The Apache is an attack helicopter that makes up the Army Combat Aviation Brigades. The expected life cycle is about 20 years.</p>	1	2	<p><b>AH-64E Reman</b></p> <p>Timeline: <b>2010–2024</b></p> <p>The AH-64E Reman is a program to remanufacture old Apache helicopters into the more advanced AH-64E version. The AH-64E will have more modern and interoperable systems and be able to carry modern munitions.</p> <p><b>PROCUREMENT</b> <b>SPENDING (\$ millions)</b></p> <p>341 298 \$8,500 \$6,048</p>	2	4
<p><b>AH-64E</b></p> <p>Inventory: <b>203</b> Fleet age: <b>4</b> Date: <b>2013</b></p> <p>The AH-64E variant of the Apache is a remanufactured version with substantial upgrades in powerplant, avionics, communications, and weapons capabilities. The expected life cycle is about 20 years.</p>			<p><b>AH-64E New Build</b></p> <p>Timeline: <b>2013–2028</b></p> <p>The AH-64E New Build pays for the production of new Apaches. The program is meant to modernize and sustain the current Apache inventory. The AH-64E will have more modern and interoperable systems and be able to carry modern munitions. FY 2019 defense appropriation support increased procurement quantities to address national guard shortfalls.</p> <p><b>PROCUREMENT</b> <b>SPENDING (\$ millions)</b></p> <p>58 \$1,528</p>	2	4

## Medium Lift

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>UH-60A Black Hawk</b></p> <p>Inventory: <b>802</b> Fleet age: <b>25</b> Date: <b>1979</b></p> <p>The Black Hawk UH-60A is a medium-lift utility helicopter. The expected life span is about 25 years. This variant of the Black Hawk is now being replaced by the newer UH-60M variant.</p>	1	3	<p><b>UH-60M Black Hawk</b></p> <p>Timeline: <b>2005–2030</b></p> <p>The UH-60Ms, currently in production, are intended to modernize and replace current Black Hawk inventories. The newer M variant will improve the Black Hawk's range and lift by upgrading the rotor blades, engine, and computers.</p> <p><b>PROCUREMENT</b> <b>SPENDING (\$ millions)</b></p> <p>926 444 \$18,149 \$9,290</p>	5	4
<p><b>UH-60M Black Hawk</b></p> <p>Inventory: <b>621</b> Fleet age: <b>9</b> Date: <b>2006</b></p> <p>The Black Hawk UH-60M is a medium-lift utility helicopter that is a follow-on to the UH-60A. As the UH-60A is retired, the M variant will be the main medium-lift rotorcraft used by the Army. Expected to remain in service until 2030.</p>			4		

See Methodology for descriptions of scores. Fleet age—Average age of fleet Date—Year fleet first entered service

# ARMY SCORES



Procurement and Spending ■ Through FY 2018  
■ Pending

## Heavy Lift

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>CH-47D Chinook</b></p> <p>Inventory: <b>60</b> Fleet age: <b>28</b> Date: <b>1962</b></p> <p>The Chinook is a heavy-lift helicopter. It has an expected life cycle of 20 years. The CH-47Ds were originally upgraded from earlier variants of the CH-47s.</p>	<b>1</b>		<p><b>CH-47F</b></p> <p>Timeline: <b>2003-TBD</b></p> <p>Currently in production, the CH-47F program is intended to keep the fleet of heavy-lift rotorcraft healthy as older variants of the CH-47 are retired. The program includes both remanufactured and new builds of CH-47s. The F variant has engine and airframe upgrades to lower the maintenance requirements. Total procurement numbers include the MH-47G configuration for U.S. Special Operations Command (67 total). FY2018 funding exceeded stated acquisition objectives, citing “emergency requirements.”</p>	<b>5</b>	<b>4</b>
<p><b>CH-47F Chinook</b></p> <p>Inventory: <b>390</b> Fleet age: <b>4.4</b> Date: <b>2001</b></p> <p>CH-47F is “a remanufactured version of the CH-47D with a new digital cockpit and modified airframe to reduce vibrations.” It also includes a common aviation architecture cockpit and advanced cargo-handling capabilities. The expected life span is 35 years.</p>	<b>5</b>	<b>5</b>	<p><b>PROCUREMENT</b></p> <p style="text-align: center;">548</p> <p><b>SPENDING (\$ millions)</b></p> <p style="text-align: center;">\$15,077</p>		

## Intelligence, Surveillance, and Reconnaissance (ISR)

PLATFORM	Age Score	Capability Score	MODERNIZATION PROGRAM	Size Score	Health Score
<p><b>MQ-1C Gray Eagle</b></p> <p>Inventory: <b>125</b> Fleet age: <b>3</b> Date: <b>2009</b></p> <p>The Gray Eagle is a medium-altitude long-endurance (MALE) unmanned aerial vehicle (UAV) used to conduct ISR missions. The use of MALE UAVs is a new capability for the Army. The Gray Eagle is currently in production.</p>	<b>5</b>	<b>5</b>	<p><b>MQ-1C Gray Eagle</b></p> <p>Timeline: <b>2010-2016</b></p> <p>The MQ-1C UAV provides Army reconnaissance, surveillance, and target acquisition capabilities. The army is continuing to procure MQ1Cs to replace combat losses.</p>	<b>5</b>	<b>4</b>
			<p><b>PROCUREMENT</b></p> <p style="text-align: center;">204</p> <p><b>SPENDING (\$ millions)</b></p> <p style="text-align: center;">\$5,761     \$146</p>		

**SOURCE:** Heritage Foundation research using data from government documents and websites. See also Dakota L. Wood, ed., *2018 Index of U.S. Military Strength* (Washington, DC: The Heritage Foundation, 2018), <http://index.heritage.org/militarystrength/>.

See Methodology for descriptions of scores.     Fleet age—Average age of fleet     Date—Year fleet first entered service

## Endnotes

1. Congressional Quarterly, "Senate Appropriations Subcommittee on Defense Holds Hearing on the Fiscal 2019 Budget Request for the Defense Department," CQ Financial Transcripts, May 9, 2018, <https://plus.cq.com/doc/financialtranscripts-5314019?6> (accessed June 2, 2018).
2. The Honorable Mark T. Esper, Secretary of the Army, and General Mark A. Milley, Chief of Staff, U.S. Army, statement "On the Posture of the United States Army" before the Committee on Armed Services, U.S. Senate, 115th Cong., 2nd Sess., April 12, 2018, p. 1, [https://www.armed-services.senate.gov/imo/media/doc/Esper-Milley\\_04-12-18.pdf](https://www.armed-services.senate.gov/imo/media/doc/Esper-Milley_04-12-18.pdf) (accessed June 2, 2018).
3. Congressional Quarterly, "Senate Armed Services Committee Holds Hearing on the Fiscal 2019 Budget Request for the Army Department," CQ Financial Transcripts, April 12, 2018, <https://plus.cq.com/doc/financialtranscripts-5297588?5> (accessed June 5, 2018).
4. Esper and Milley, statement "On the Posture of the United States Army," April 12, 2018, p. 4.
5. Congressional Quarterly, "Senate Armed Services Committee Holds Hearing on the Fiscal 2019 Budget Request for the Army Department," April 12, 2018.
6. General Daniel Allyn, Vice Chief of Staff, U.S. Army, statement on "Current State of Readiness of the U.S. Forces" before the Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate, 115th Cong., 1st Sess., February 8, 2017, p. 4, [https://www.armed-services.senate.gov/imo/media/doc/Allyn\\_02-08-17.pdf](https://www.armed-services.senate.gov/imo/media/doc/Allyn_02-08-17.pdf) (accessed May 22, 2018).
7. Congressional Quarterly, "House Armed Services Committee Subcommittee on Readiness Holds Hearing on Army Readiness Posture," CQ Congressional Transcripts, April 19, 2018, <https://plus.cq.com/doc/congressionaltranscripts-5302905?9> (accessed May 15, 2018).
8. Congressional Quarterly, "House Armed Services Committee Holds Hearing on the State of the Military," CQ Congressional Transcripts, February 7, 2017, <https://plus.cq.com/doc/congressionaltranscripts-5036905?7> (accessed May 23, 2018).
9. Major General Paul A. Chamberlain, Director, Army Budget, and Davis S. Welch, Deputy Director, Army Budget, *Army FY 2019 Budget Overview*, February 2018, p. 6, <https://www.asafm.army.mil/documents/BudgetMaterial/FY2019/Army%20FY%202019%20Budget%20Overview.pdf> (accessed June 5, 2018).
10. Michelle Tan, "Army Lays out Plan to Cut 40,000 Soldiers," *Army Times*, July 10, 2015, <http://www.armytimes.com/story/military/pentagon/2015/07/09/army-outlines-40000-cuts/29923339/> (accessed May 23, 2018).
11. Congressional Quarterly, "Senate Armed Services Committee Holds Hearing on the Fiscal 2019 Budget Request for the Army Department," April 12, 2018.
12. Ibid.
13. Congressional Quarterly, "House Armed Services Committee Subcommittee on Readiness Holds Hearing on Army Readiness Posture," April 19, 2018.
14. Chamberlain and Welch, *Army FY 2019 Budget Overview*, p. 6.
15. Congressional Quarterly, "Senate Armed Services Committee Holds Hearing on the Fiscal 2019 Budget Request for the Army Department," April 12, 2018.
16. Congressional Quarterly, "Senate Appropriations Subcommittee on Defense Holds Hearing on the U.S. Army Fiscal 2018 Budget," CQ Congressional Transcripts, June 7, 2017, <http://www.cq.com/doc/congressionaltranscripts-5117288?33#speakers> (accessed June 5, 2018).
17. U.S. Department of the Army, Field Manual 3-96, *Brigade Combat Team*, October 2015, [http://www.apd.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/fm3\\_96.pdf](http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/fm3_96.pdf) (accessed July 26, 2017).
18. Ibid., p. 3-31.
19. Andrew Feickert, "Army Drawdown and Restructuring: Background and Issues for Congress," Congressional Research Service *Report for Members and Committees of Congress*, February 28, 2014, p. 18, <https://www.fas.org/sgp/crs/natsec/R42493.pdf> (accessed July 18, 2017).
20. The 13 percent estimate is based on a review of historical figures as referenced in U.S. Government Accountability Office, *Army Planning: Comprehensive Risk Assessment Needed for Planned Changes to the Army's Force Structure*, GAO-16-327, April 2016, p. 12, <http://www.gao.gov/assets/680/676516.pdf> (accessed June 21, 2016).
21. U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2017*, March 2016, p. 260, [http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2017/FY17\\_Green\\_Book.pdf](http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2017/FY17_Green_Book.pdf) (accessed July 19, 2017).

22. Congressional Quarterly, "House Armed Services Committee Subcommittee on Readiness Holds Hearing on Army Readiness Posture," April 19, 2018.
23. Ibid.
24. National Commission on the Future of the Army, *Report to the President and the Congress of the United States*, January 28, 2016, p. 52, [http://www.ncfa.ncr.gov/sites/default/files/NCFA\\_Full%20Final%20Report\\_0.pdf](http://www.ncfa.ncr.gov/sites/default/files/NCFA_Full%20Final%20Report_0.pdf) (accessed July 19, 2017).
25. Chamberlain and Welch, *Army FY 2019 Budget Overview*, p. 8.
26. C. Todd Lopez, "Security Force Assistance Brigades to Free Brigade Combat Teams from Advise, Assist Mission," U.S. Army, May 18, 2017, [https://www.army.mil/article/188004/security\\_force\\_assistance\\_brigades\\_to\\_free\\_brigade\\_combat\\_teams\\_from\\_advise\\_assist\\_mission](https://www.army.mil/article/188004/security_force_assistance_brigades_to_free_brigade_combat_teams_from_advise_assist_mission) (accessed July 19, 2017).
27. Congressional Quarterly, "House Armed Services Committee Subcommittee on Readiness Holds Hearing on Army Readiness Posture," April 19, 2018.
28. General Daniel Allyn, Vice Chief of Staff, U.S. Army, statement on "Current State of Readiness of the U.S. Forces in Review of the Defense Authorization Request for Fiscal Year 2017 and the Future Years Defense Program" before the Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate, 114th Cong., 2nd Sess., March 15, 2016, p. 2, [http://www.armed-services.senate.gov/imo/media/doc/Allyn\\_03-15-16.pdf](http://www.armed-services.senate.gov/imo/media/doc/Allyn_03-15-16.pdf) (accessed June 26, 2016).
29. U.S. Department of the Army, *Department of Defense Fiscal Year (FY) 2018 Budget Estimates, Volume I, Operation and Maintenance, Army: Justification of Estimates*, May 2017, p. 120, <https://www.asafm.army.mil/documents/BudgetMaterial/fy2018/oma-v1.pdf> (accessed July 18, 2017).
30. Chamberlain and Welch, *Army FY 2019 Budget Overview*, p. 6.
31. Todd South, "Army Works to Balance High Operations Tempo with Increased Training," *Army Times*, October 8, 2017, <https://www.armytimes.com/news/your-army/2017/10/08/army-works-to-balance-high-operations-tempo-with-increased-training/> (accessed June 5, 2018).
32. See Andrew Gregory, "Maintaining a Deep Bench: Why Armored BCT Rotations in Europe and Korea Are Best for America's Global Security Requirements," Modern War Institute, July 31, 2017, <https://mwi.usma.edu/maintaining-deep-bench-armored-bct-rotations-europe-korea-best-americas-global-security-requirements/> (accessed June 5, 2018), and Daniel Kochis and Thomas Spoehr, "It's Time to Move US Forces Back to Europe," Heritage Foundation *Commentary*, September 15, 2017, <https://www.heritage.org/defense/commentary/its-time-move-us-forces-back-europe>.
33. David Vergun, "Associated Units Concept Improving Readiness, says MG Jarrard," U.S. Army, November 2, 2017, [https://www.army.mil/article/196318/associated\\_units\\_concept\\_improving\\_readiness\\_says\\_mg\\_jarrard](https://www.army.mil/article/196318/associated_units_concept_improving_readiness_says_mg_jarrard) (accessed June 5, 2018).
34. Technical Sergeant Erich B. Smith, "Readiness Enhanced with Army National Guard 4.0 Initiative," U.S. Army, February 26, 2018, [https://www.army.mil/article/201131/readiness\\_enhanced\\_with\\_army\\_national\\_guard\\_40\\_initiative](https://www.army.mil/article/201131/readiness_enhanced_with_army_national_guard_40_initiative) (accessed June 5, 2018).
35. Andrew Feickert, "The Army's M-1 Abrams, M-2/M-3 Bradley, and M-1126 Stryker: Background and Issues for Congress," Congressional Research Service *Report for Members and Committees of Congress*, April 5, 2016, p. 9, <https://www.fas.org/sgp/crs/weapons/R44229.pdf> (accessed July 26, 2017), and Ashley Givens, "Army Rolls Out Latest Version of Iconic Abrams Main Battle Tank," U.S. Army, October 9, 2017, [https://www.army.mil/article/194952/army\\_rolls\\_out\\_latest\\_version\\_of\\_iconic\\_abrams\\_main\\_battle\\_tank](https://www.army.mil/article/194952/army_rolls_out_latest_version_of_iconic_abrams_main_battle_tank) (accessed June 5, 2018).
36. Allen Cone, "BAE Delivers Armored Multi-Purpose Vehicles to Army for Testing," United Press International, April 4, 2018, <https://www.upi.com/BAE-delivers-Armored-Multi-Purpose-Vehicles-to-Army-for-testing/5181522850392/> (accessed June 5, 2018).
37. Kyle Rempfer, "New Upgunned Stryker Arrives in Europe," *Army Times*, December 19, 2017, <https://www.armytimes.com/news/2017/12/19/new-upgunned-stryker-arrives-in-europe/> (accessed June 5, 2018).
38. Nancy Montgomery, "Flyer-based Vehicle to give 173rd Airborne Troops Speed on the Ground," *Stars and Stripes*, May 10, 2018, <https://www.stripes.com/news/flyer-based-vehicle-to-give-173rd-airborne-troops-speed-on-the-ground-1.526208> (accessed June 5, 2018).
39. Feickert, "The Army's M-1 Abrams, M-2/M-3 Bradley, and M-1126 Stryker," p. 1.
40. U.S. Department of the Army, *Department of Defense Fiscal Year (FY) 2019 Budget Estimates, Army: Justification Book of Aircraft Procurement, Army*, February 2018, p. 73, <https://www.asafm.army.mil/documents/BudgetMaterial/FY2019/aircraft.pdf> (accessed June 5, 2018).
41. U.S. Department of the Army, Assistant Secretary of the Army (Financial Management and Comptroller), *FY 2019 President's Budget Highlights*, February 2018, p. 20, <https://www.asafm.army.mil/documents/BudgetMaterial/FY2019/Army%20FY%202019%20Budget%20Highlights.pdf> (accessed June 5, 2018).

42. Lieutenant General John M. Murray, Deputy Chief of Staff of the Army, G-8, and Lieutenant General Paul A. Ostrowski, Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics and Technology, statement on “Army Modernization” before the Subcommittee on Tactical Air and Land Forces, Committee on Armed Services, U.S. House of Representatives, 115th Cong., 2nd Sess., April 18, 2018, p. 2, <https://docs.house.gov/meetings/AS/AS25/20180418/108159/HHRG-115-AS25-Wstate-MurrayJ-20180418.pdf> (accessed June 5, 2018).
43. Andrew Feickert, “Army Futures Command (AFC),” Congressional Research Service *Insight*, July 16, 2018, <https://fas.org/sgp/crs/natsec/IN10889.pdf> (accessed July 20, 2018).
44. U.S. Army, Training and Doctrine Command, Army Capability Integration Center, “U.S. Army Modernization Strategy,” June 6, 2018, [https://www.army.mil/standto/archive\\_2018-06-06](https://www.army.mil/standto/archive_2018-06-06) (accessed July 20, 2018).
45. Courtney McBride, “Wesley: Russia Offers ‘Pacing Threat’ for Army Modernization Efforts,” *Inside Defense*, November 1, 2016, <https://insidedefense.com/daily-news/wesley-russia-offers-pacing-threat-army-modernization-efforts> (accessed July 18, 2017).
46. U.S. Department of the Army, *Department of Defense Fiscal Year (FY) 2019 Budget Estimates, Army: Justification Book of Other Procurement, Army: Tactical and Support Vehicles, Budget Activity 1*, February 2018, p. 42, <https://www.asafm.army.mil/documents/BudgetMaterial/FY2019/opa1.pdf> (accessed June 7, 2018).
47. *Ibid.*, p. 43.
48. Chamberlain and Welch, *Army FY 2019 Budget Overview*, p. 8.
49. Murray and Ostrowski, statement on “Army Modernization,” April 18, 2018, p. 3.
50. Congressional Quarterly, “Senate Armed Services Committee Holds Hearing on the Fiscal 2019 Budget Request for the Army Department,” April 12, 2018, and Congressional Quarterly, “House Armed Services Committee Subcommittee on Readiness Holds Hearing on Army Readiness Posture,” April 19, 2018.
51. *Ibid.*
52. G3/5/7, “OPTEMPO and Full-Spectrum Operations Training,” U.S. Army STAND-TO! January 26, 2011, [https://www.army.mil/article/50883/optempo\\_and\\_full\\_spectrum\\_operations\\_training](https://www.army.mil/article/50883/optempo_and_full_spectrum_operations_training) (accessed June 7, 2018).
53. U.S. Department of the Army, *Department of the Army Fiscal Year (FY) 2019 Budget Estimates, Volume I, Operation and Maintenance, Army: Justification of Estimates*, February 2018 (Revised), p. 2, <https://www.asafm.army.mil/documents/BudgetMaterial/FY2019/oma-v1.pdf> (accessed June 5, 2018).
54. U.S. Department of the Army, *Department of the Army Fiscal Year (FY) 2018 Budget Estimates, Volume I, Operation and Maintenance, Army: Justification of Estimates*, May 2017, p. 2, <https://www.asafm.army.mil/documents/BudgetMaterial/fy2018/oma-v1.pdf> (accessed June 5, 2018).
55. U.S. Department of the Army, *Department of Defense Fiscal Year (FY) 2019 Budget Estimates, Volume I, Operation and Maintenance, Army: Justification of Estimates*, February 2018 (Revised), p. 1, <https://www.asafm.army.mil/documents/BudgetMaterial/FY2019/oma-v1.pdf> (accessed June 5, 2018).
56. Esper and Milley, statement “On the Posture of the United States Army,” April 12, 2018, p. 3.
57. Meghann Myers, “Only a Third of the Army’s BCTs Are Ready to Deploy. Here’s How the Service Plans to Fix That,” *Army Times*, May 21, 2018, <https://www.armytimes.com/news/your-army/2018/05/21/only-a-third-of-the-armys-bcts-are-ready-to-deploy-heres-how-the-service-plans-to-fix-that/> (accessed July 20, 2018).
58. Army G-3/5/7, “Army Readiness Guidance,” U.S. Army STAND-TO! May 19, 2016, <https://www.army.mil/standto/2016-05-19> (accessed June 5, 2018).
59. U.S. Department of the Army, “Combat Training Center Program,” Army Regulation 350–50, April 3, 2013, p. 1, [https://armypubs.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/ARN8650\\_AR350\\_50\\_Final.pdfhttp://www.apd.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/r350\\_50.pdf](https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN8650_AR350_50_Final.pdfhttp://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/r350_50.pdf) (accessed August 8, 2017).
60. Chamberlain and Welch, *Army FY 2019 Budget Overview*, p. 8.
61. Michelle Tan, “‘Objective T’: The Army’s New Mission to Track Training,” *Army Times*, October 11, 2016, <https://www.armytimes.com/articles/objective-t-the-armys-new-mission-to-track-training> (accessed June 7, 2018).
62. Congressional Quarterly, “House Armed Services Subcommittee on Readiness Holds Hearing on Current State of U.S. Army Readiness,” March 8, 2017, <http://www.cq.com/doc/congressionaltranscripts-5057103?2> (accessed June 7, 2018).
63. Note that the first figures derive from an average BCT size of 4,500 and average division size of 15,000. The second set of numbers derives from the current average of around 3.5 BCTs per division and analysis of the structure of each Army division.

64. Congressional Quarterly, "Senate Armed Services Committee Holds Hearing on the Fiscal 2019 Budget Request for the Army Department," April 12, 2018.
65. Congressional Quarterly, "House Armed Services Committee Subcommittee on Readiness Holds Hearing on Army Readiness Posture," April 19, 2018, <https://plus.cq.com/doc/congressionaltranscripts-5302905?9> (accessed May 15, 2018).