

U.S. Army

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The U.S. Army is America’s primary agent for the conduct of land warfare. Although it is capable of all types of operations across the range of military operations and support to civil authorities, its chief value to the nation is its ability to defeat and destroy enemy land forces in battle.

The Army is engaged throughout the world in protecting and advancing U.S. interests. As of April 19, 2023, the Army had “137,000 soldiers in over 140 countries” supporting America’s security interests.¹ Most notably, it has deployed significant forces to NATO countries as a deterrent to further aggression by Russia. As of May 2, 2023, 43,000 soldiers were deployed to Europe bolstering NATO and demonstrating U.S. commitment to the region.²

On May 2, 2023, speaking of the deployments to Europe, Secretary of the Army Christine Wormuth and then-Army Chief of Staff General James C. McConville testified that:

In Poland, the Army has forward-stationed the V Corps Headquarters Forward Command Post—the first permanent U.S. forces on NATO’s eastern flank. We are maintaining a substantial rotational force in Poland, including an Armored Brigade Combat Team (ABCT), combat aviation brigade, and a division headquarters. In Romania, we have headquartered a rotational brigade combat team, supporting an additional maneuver force on the eastern flank. In the Baltics, we have enhanced our rotational deployments—which include armored, aviation, air defense, and special operations forces—to reinforce Baltic security, enhance interoperability, and demonstrate the flexibility and combat readiness of U.S. forces.³

The Army, like the other military services, finds itself under extraordinary operational and financial pressure. In some cases, advances in firepower like ballistic and cruise missiles, electronic warfare capabilities, and loitering munitions delivered by drones fielded by adversaries like China, Russia, and Iran have outpaced the U.S. Army’s capabilities. Information-age warfare requires new levels of speed and precision in Army sensor-to-shooter chains. Autonomy is changing the character of warfare, and the Army has developed some bold ideas about how to take advantage of this technology, but today they are aspirational.

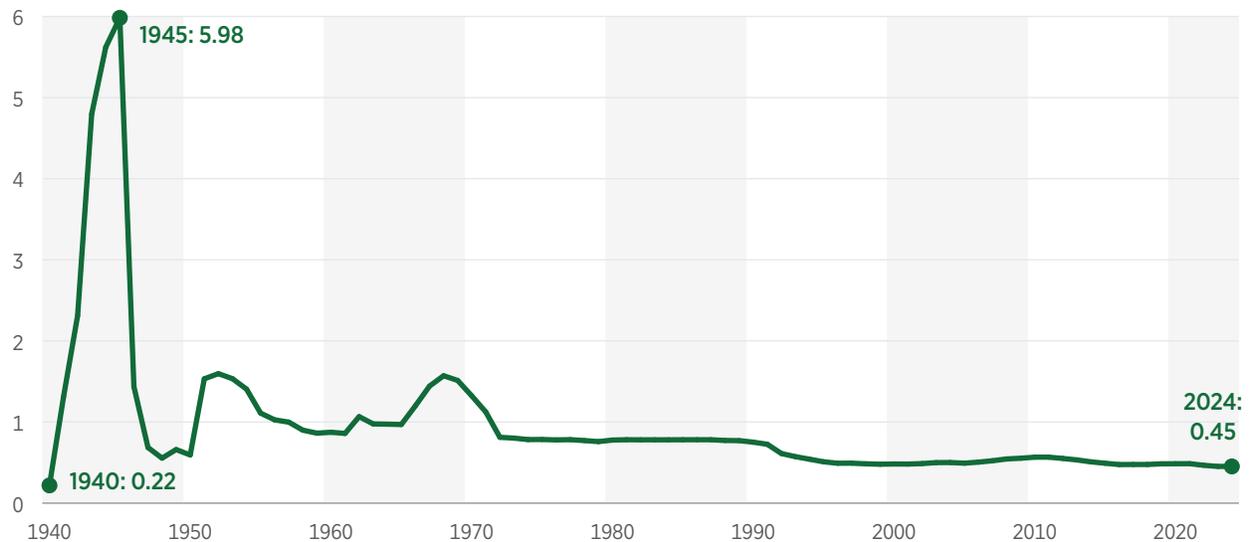
In her initial message to the Army, Secretary Wormuth set out six objectives. The first and arguably most important is to “put the Army on a sustainable strategic path amidst this uncertainty.” Wormuth acknowledged that the Army is “facing increased fiscal pressures,” and while the objective of “a sustainable strategic path” is noble and well-founded, it is not at all clear how the Army will be able to find such a path given its significant and continuing year-over-year losses in buying power.⁴

When official inflation is factored in, the Army has cumulatively lost over \$74 billion in buying power from fiscal year (FY) 2019 to the President’s Budget Request for FY 2024. If Army budgets since 2019 had merely kept up with inflation, the request for FY 2024 would have been \$210.9 billion. Instead, the requested budget was \$185.5 billion.⁵ Signs of budget strain are clearly visible in the Army’s proposal to cut large procurement programs such as Paladin Integrated Management (PIM) (reduced by \$211 million from FY 2023); Stryker upgrades (reduced by \$277 million from FY 2023); and Abrams tank upgrades (reduced by \$549 million from FY 2023).⁶

CHART 11

Army End Strength Lowest Since 1940

END STRENGTH/FULL-TIME EMPLOYEES, IN MILLIONS



SOURCE: Table 7-5, “Department of Defense Manpower,” in U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2024*, May 2023, pp. 288–290, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY24_Green_Book.pdf (accessed September 14, 2023).

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Arguments are being made that America no longer needs a strong modern Army because, for example, China is largely a maritime threat, but such arguments ignore history.⁷ We need to look no further than the ongoing war in Europe between Russia and Ukraine to remember that capable land power is an enduring need for the United States.

America has a horrible record of predicting where it will fight its next war. As former Secretary of Defense Robert Gates famously said:

When it comes to predicting the nature and location of our next military engagements, since Vietnam, our record has been perfect. We have never once gotten it right, from the Mayaguez to Grenada, Panama, Somalia, the Balkans, Haiti, Kuwait, Iraq, and more—we had no idea a year before any of these missions that we would be so engaged.⁸

America should not be willing to gamble that the next conflict will be in the Indo-Pacific and

put all our eggs in one basket—largely naval—and ignore the continuing need for land power that would be essential in many regions and contexts. Many overlook the fact that great-power competition with China and Russia is a global contest, which means that we face the enduring need to counter aggression wherever it may occur, not just within the territory or waters of China or Russia. All of this reinforces the reality that America has a long-term need for modernized, sufficiently sized land power.

An Army Recruiting Crisis. In its FY 2023 budget request, the Army asked for and received a cut of 12,000 in its Regular Army end strength from 485,000 to 473,000. Later in 2023, based on a rapidly deteriorating recruiting forecast, the Army requested that its end strength be lowered by an additional 21,000 to 452,000 for a total of 33,000 compared to its original request for that year. This extraordinary move reflects the dire nature of the recruiting crisis facing both the Army and, to a degree, the other services as well.⁹ Pentagon leaders

testified in April 2023 that “[t]he Army, Navy, and Air Force will not make enlistment goals this year.”¹⁰

The Army is facing a recruiting crisis the likes of which it has not experienced since the transition to the All-Volunteer Force in 1973.¹¹ Since 2018, the Army has been missing its recruiting goals and making up the difference with strong numbers of reenlistments. Now facing extraordinary financial pressure and in order to save money, it has been forced to face reality and cut spaces for servicemembers that it does not anticipate being able to recruit. The reasons for this crisis are many.

- The percentage of Americans that qualify for military service without a waiver dropped from 29 percent in 2017 to 23 percent in 2022.
- The predominant factor in disqualification is obesity.¹²
- Low unemployment makes recruiting difficult, and as this book was being prepared, the U.S. unemployment rate was 3.5 percent.¹³
- Finally, for a variety of reasons that are beyond the scope of this study, fewer Americans are expressing a desire to serve in the armed forces.¹⁴

The results of this recruiting crisis include lower manning in Army formations, critical shortages in certain career fields, and lower overall readiness. If the crisis is not ameliorated, its longer-term implications are even more consequential.

Chronic Underfunding. The U.S. Army is currently the world’s most powerful army in terms of the equipment it uses and the combat effectiveness of its formations, but it is also too small and insufficiently modern to meet even the modest requirements of the 2022 National Defense Strategy (NDS),¹⁵ much less to handle two major regional contingencies (MRCs) simultaneously, which many experts believe is necessary.¹⁶

Even though the conflict in Iraq has ended and the military was withdrawn from Afghanistan, the Army’s focus on counterinsurgency during the period from 2001 to 2016 essentially precluded the service from modernizing the key combat capabilities that it needs now for near-peer competition. In 2011, for example, the Army cancelled its only mid-tier air defense program, the Surface Launched Advanced

Medium-Range Air-to-Air Missile (SLAMRAAM), based on its assessment that it would not face a threat from the air in the foreseeable future.¹⁷ In 2022, the Army contracted to buy from Norway largely the same system, the National Advanced Surface-to-Air Missile System (NASAMS), that it cancelled in 2011, now to support Ukraine.¹⁸

The Army’s last major modernization efforts occurred in the 1980s with the fielding of the M-1 Abrams Tank, the M-2 Bradley Fighting Vehicle, and the Blackhawk and Apache helicopters. As General McConville has cogently argued, “the Army is changing to meet our future challenges. These changes cannot happen through incremental improvements. We must transform the Army, and the time is now.”¹⁹ This implies a modernization effort contemporary with the current threat environment rather than that of the Cold War and an updating of warfighting concepts not rooted in the Cold War but developed and experienced during nearly two decades of counterinsurgency operations.

The Army’s ability to transition from counterinsurgency operations was further constrained by a period of fiscal austerity that began with the Budget Control Act (BCA) of 2011 and lasted for ten years.²⁰ The inability to fund what was needed led to difficult across-the-board trade-offs in equipment, manpower, and operations accounts. Downward budget pressure drove the Department of Defense (DOD) in 2014 to consider cutting the Army’s Active component end strength from more than 500,000 to 420,000. If implemented, this would have resulted in “the smallest number of troops since before the Second World War.”²¹ Multiple equipment modernization programs were cancelled.

The change of Administrations in 2017 forestalled those cuts in end strength. However, the addition of billions of dollars by Congress and the Trump Administration, while it served to arrest the decline of the Army and significantly improve unit readiness, was not sufficient to modernize or significantly increase the size of the force.²²

Uncertain Strategic Direction. The Biden Administration’s National Security Strategy, published in October 2022, was strangely silent on the topic of military force; in fact, the U.S. Army does not appear at all in the document. The National Defense Strategy similarly contains little useful guidance with respect to the Administration’s views on the Army and its role in defending U.S. national interests.²³ As

TABLE 7

Brigade Combat Teams Deployed to Europe in Support of Ukraine

The addition of three units more than doubles the Army's presence in Europe.

DEPLOYED TO EUROPE TO SUPPORT UKRAINE DETERRENCE*	
Region	Unit
Europe	2nd Brigade Combat Team, 3rd Infantry Division
Europe	2nd Brigade Combat Team, 1st Armored Division
Romania	1st Brigade Combat Team, 101st Airborne Division

UNITS NORMALLY PRESENT IN EUROPE	
Region	Unit
Germany	2nd Cavalry Regiment
Italy	173rd Infantry Brigade (Airborne)

* As of July 2023.

NOTE: A Brigade Combat Team is comprised of approximately 4,500 soldiers.

SOURCES:

- U.S. Army Public Affairs, "Army Announces Upcoming Unit Deployments," March 8, 2023, <https://www.army.mil/article/264554/army> (accessed September 11, 2023).
- John Vandiver, "Soldiers from 101st Airborne, 10th Mountain Divisions Expected to Deploy to Romania," *Stars and Stripes*, January 23, 2023, <https://www.stripes.com/branches/army/2023-01-23/romania-101st-10th-mountain-army-8859339.html> (accessed September 11, 2023).
- U.S. Army Europe and Africa, "U.S. Army Europe and Africa Units," <https://www.europeafrica.army.mil/Units/> (accessed September 11, 2023).

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but one consequence, this absence of clarity in mission, prioritization, and even value as they related to land power has not helped the Army to make a compelling case for programs, capacity, and focus.

Loss of Buying Power. Despite relatively broad agreement that the DOD budget needed real growth of 3 percent to 5 percent to avoid a strategy–budget mismatch,²⁴ the Army budget topline did not meet that target in FY 2019 and has not done so since.

Of all the services, the Army has fared the worst in terms of resources. Its funding levels plateaued with the FY 2020 budget and since then have declined in constant dollars. The Army received approximately \$181 billion in FY 2019, \$186 billion in FY 2020, \$177 billion in FY 2021, \$185 billion in FY 2022, and \$185 billion for FY 2023 and requested approximately \$185 billion for FY 2024, amounting to a relatively flat budget over the past half-decade while the costs of manpower, matériel, and energy have increased.²⁵

Testifying before the House Appropriations Committee's Subcommittee on Tactical Air and Land Forces in April 2023, Lieutenant General Erik

Peterson, Army Deputy Chief of Staff for Programs, summarized the situation in starkly candid terms:

Several years of ruthless prioritization, eliminating, reducing and deferring lower priority and less necessary efforts, as well as divesting of legacy capabilities, has left little flexibility in our topline. We made the easy choices the first couple of years of this effort. We're now well into the realm of hard choices, really hard choices and downright excruciating choices.²⁶

General McConville's more than \$1.9 billion Unfunded Priority List for FY 2024, containing dozens of critical items, is testament to what the Army was not able to include in its budget request: air defense systems, organic industrial base modernization, and helicopter replacement—among many other programs.²⁷

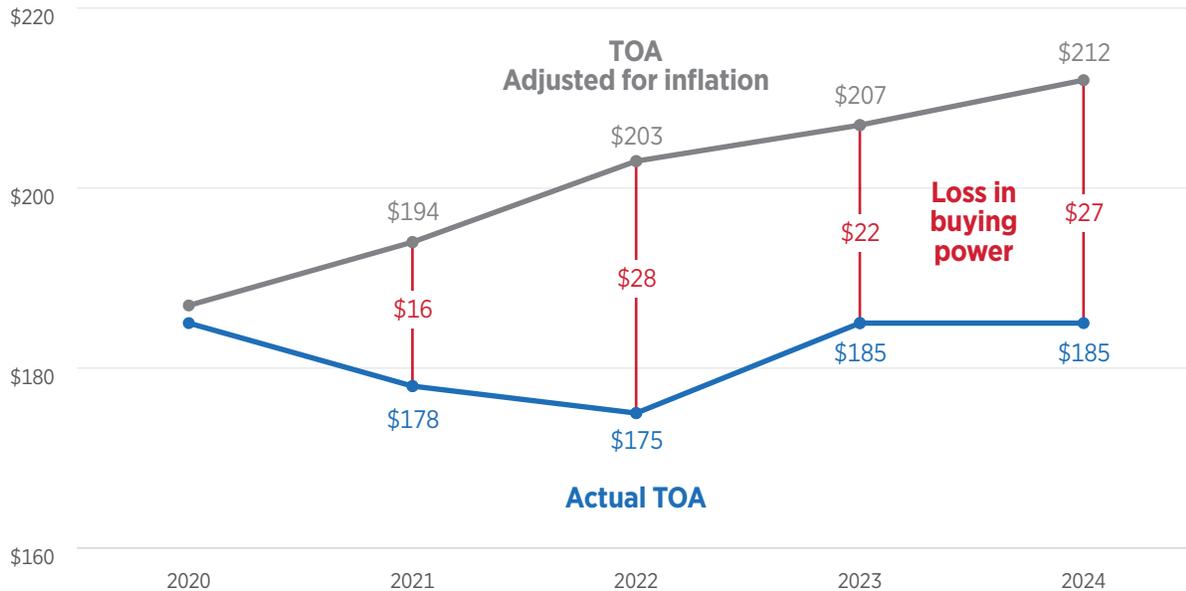
Capacity

Capacity refers to the sufficiency of forces and equipment needed to execute the National Defense

Army Budget Hit by Both Cuts and Inflation

Not only is the Army's total obligation authority (TOA) declining in real terms, but due to inflation, those declines have resulted in an additional loss of buying power since 2020. Combined losses from 2020 to 2024 total \$93 billion.

BILLIONS OF DOLLARS



SOURCES: Honorable Gabe Camarillo, Under Secretary of the Army, "Army Fiscal Year 2024 Budget Overview," PowerPoint Presentation, p. 14, <https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2024/pbr/Army%20FY%202024%20Budget%20Overview%20Briefing.pdf> (accessed September 14, 2023), and Table S-9, "Economic Assumptions," in Executive Office of the President, Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2024*, p. 167, https://www.whitehouse.gov/wp-content/uploads/2023/03/budget_fy2024.pdf (accessed September 14, 2023).

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Strategy. One of the ways the Army quantifies its warfighting capacity is by its number of Brigade Combat Teams (BCTs).

Brigade Combat Teams. BCTs are the Army's primary combined arms, close combat force. They often operate as part of a division or joint task force, both of which are the basic building blocks for employment of Army combat forces. BCTs are usually employed within a larger framework of U.S. land operations but are equipped and organized so that they can conduct limited independent operations as circumstances demand.²⁸

BCTs range between 4,000 and 4,700 soldiers in size. There are three types: Infantry, Armored, and Stryker. At its core, each of these formations

has three maneuver battalions enabled by multiple other units such as artillery, engineers, reconnaissance, logistics, and signal units.²⁹

The simplest way to understand the status of hard Army combat power is to know the readiness, quantity, and modernization level of BCTs. This section deals with the number of BCTs in the force.

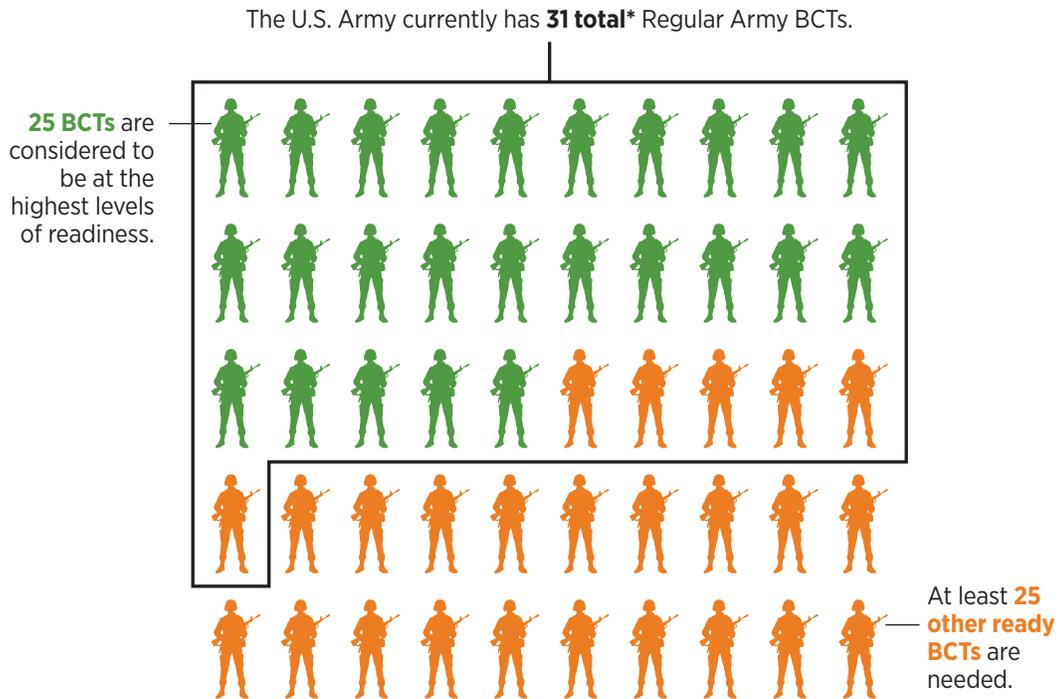
In 2013, the Army announced that because of end strength reductions and the priorities of the prior Administration, the number of Regular Army BCTs would be reduced from 45 to 33.³⁰ Subsequent reductions reduced the number of Regular Army BCTs from 33 to 31, where they remain today.³¹

When the Trump Administration and Congress reversed the planned drawdown in Army end

FIGURE 3

Army Capacity: Brigade Combat Teams

Based on historical force requirements, The Heritage Foundation assesses that the Army needs a total of 50 Brigade Combat Teams (BCTs).



* Includes four Army National Guard BCTs.

SOURCE: Email from Professional Staff, U.S. House of Representative, Committee on Appropriations, July 14, 2023.

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strength and authorized personnel growth beginning in 2018, instead of “re-growing” the numbers of BCTs, the Army chose to “thicken” the force and raise the manning levels within the individual BCTs to increase unit readiness. The Army’s goal was to fill operational units to 105 percent of their authorized manning,³² but the decision announced in the FY 2023 budget to cut end strength by 33,000 soldiers (to 452,000) will reverse those trends and cause units to be undermanned instead of overmanned.

Combat Aviation Brigades. The Regular Army also has a separate air component that is organized into Combat Aviation Brigades (CABs). CABs are made up of Army rotorcraft, such as the AH-64 Apache, and perform various roles including attack, reconnaissance, and assault. The number of Army

aviation units also has been reduced. There are now 11 CABs in the Regular Army.³³

Generating Force. CABs and Stryker, Infantry, and Armored BCTs make up the Army’s main combat fighting forces, but they obviously do not make up the entirety of the Army. Assuming that the Army shrank proportionately in all categories as it reduced to 452,000 in the Active component, there are approximately 194,000 soldiers in combat units, 123,000 in support units, and 134,000 in overhead units. Overhead is composed of administrative units and units that provide such types of support as preparing and training troops for deployments, carrying out key logistics tasks, staffing headquarters, and overseeing military schools and Army educational institutions.³⁴

TABLE 8

Major Army Combat Formations

Brigade Combat Teams	Regular Army	Army National Guard	Total
Infantry Brigade Combat Teams	14	20	33
Stryker Brigade Combat Teams	6	2	9
Armored Brigade Combat Teams	11	5	16
Total	31	27	58

Aviation Brigades	Regular Army	Army National Guard	Total
Combat Aviation Brigades	11	-	11
Expeditionary Combat Aviation Brigades	-	8	8
Theater Aviation Brigades	-	2	2
Total	11	10	21

SOURCES:

- U.S. Department of the Army, *Department of the Army Fiscal Year (FY) 2024 Budget Estimates, Volume 1, Operation and Maintenance, Army, Justification of Estimates*, March 2023, pp. 62 and 128, <https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2024/Base%20Budget/Operation%20and%20Maintenance/Regular%20Army%20Operation%20and%20Maintenance%20Volume%201.pdf> (accessed September 14, 2023).
- U.S. Department of the Army, *Department of the Army Fiscal Year (FY) 2024 Budget Estimates, Volume 1, Operation and Maintenance, Army National Guard, Justification Book*, March 2023, pp. 42 and 101, <https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2024/Base%20Budget/Operation%20and%20Maintenance/National%20Guard%20Army%20Operation%20and%20Maintenance.pdf> (accessed September 14, 2023).

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Functional or Multifunctional Support Brigades. In addition to the institutional Army, a number of functional or multifunctional support brigades provide air defense; engineering; explosive ordnance disposal; chemical, biological, radiological, and nuclear protection; military police; military intelligence; and medical support among other types of battlefield support. Special operations forces such as the 75th Ranger Regiment, six Special Forces Groups, and the 160th Special Operations Aviation Regiment are also included in these numbers.

The Army is revising its force structure to accommodate a lower active end strength. When its end strength was reduced from 485,000 to 452,000 in FY 2023, the Army did not announce any changes in force structure. This has resulted in understrength units. Among other changes, the Army is reportedly considering a 10 percent cut in Special Forces structure.³⁵ Other changes are likely.

New Concepts and Supporting Force Structure. At the same time the Army is facing the need to cut units to meet its new end strength, it is also trying to adapt its force structure to meet the anticipated new demands of near-peer competition. The foundations for these changes are contained in the Army's Multi-Domain Operations (MDO) concept, published in December 2018, which describes how the Army views the future.³⁶

In January 2022, the Army announced that it planned to modify its force structure for MDO under the designation "Army 2030." Other than that announcement, the Army has been silent on future force structure and its plans are seemingly in flux as it grapples with recruiting shortfalls. As part of its adaptation to MDO, the Army did reactivate V Corps Headquarters on October 16, 2020, to provide operational planning, mission command, and oversight of rotational forces in Europe.³⁷ On June 8,

2022, the Army reactivated the 11th Airborne Division in Alaska as an element of its “arctic strategy.”³⁸

The Army also has announced plans to create five Multi-Domain Task Forces (MDTFs): “theater-level maneuver elements designed to synchronize precision effects and precision fires in all domains against adversary anti-access/ area denial (A2/AD) networks in all domains, enabling joint forces to execute their operational plan (OPLAN)-directed roles.”³⁹ One MDTF is currently stationed at Joint Base Lewis–McChord in Washington State. The second is stationed in Wiesbaden, Germany, aligned to Europe,⁴⁰ and the third was activated on September 23, 2022, in Hawaii.⁴¹ These task forces contain rockets, missiles, military intelligence, and other capabilities that will allow Army forces to operate seamlessly with joint partners and conduct multi-domain operations. The Army has not announced plans for the remaining two of the five MDTFs that were originally envisioned.

To relieve the stress on the use of BCTs for advisory missions, the Army has activated six Security Force Assistance Brigades (SFABs), one in the National Guard and the other five in the Regular Army. These units, each one of which is composed of 816 soldiers, are designed specifically to train, advise, and mentor other partner-nation military units. The Army had been using BCTs for this mission, but because train-and-assist missions typically require senior officers and noncommissioned officers, a BCT comprised predominantly of junior soldiers was a poor fit. Other than the National Guard SFAB, the five active SFABs are regionally aligned to combatant commands.⁴²

Force Too Small to Execute the NDS. Army leaders have consistently stated that the Army is too small to execute the National Defense Strategy at less than significant risk. For FY 2023, the Army had an authorized total end strength of 1,010,500 soldiers:

- 452,000 in the Regular Army,
- 177,000 in the Army Reserve, and
- 325,000 in the Army National Guard (ARNG).⁴³

In March 2021, General McConville stated that “I would have a bigger...sized Army if I thought we could afford it, I think we need it, I really do....

I think the regular Army should be somewhere around 540–550 [thousand],” and “we’re sitting right now at 485,000.” (Of course, the Army is “sitting” now at 452,000.) He further observed that “I’ve probably already had to give up the growth that we’re going to have planned” and that “[w]e’re probably not going to grow the Army even though I’d like to, more, because end strength is something we have to take a look at.”⁴⁴

The Army’s prior plans to increase the size of the Regular Army force were slammed into reverse because of recruiting challenges. The Army had planned to raise the Regular Army incrementally to above 500,000 by adding approximately 2,000 soldiers per year.⁴⁵ At that rate, it would have reached 500,000 by around 2028. Now that modest plan is off the table.⁴⁶

Overall end strength dictates how many BCTs the Army can form, and by cutting end strength, the service not only will be unable to add more combat units or other in-demand units such as air and missile defense units, but also will have to reduce the manning levels in the units it possesses. This will drive a higher operational tempo (OPTEMPO) for Army units and increase risk both for the force and for the Army’s ability to carry out its mission.

Many outside experts agree that the U.S. Army is too small. In 2017, Congress established the National Defense Strategy Commission to provide an “independent, non-partisan review of the 2018 National Defense Strategy.” (Two of the commissioners, Dr. Kathleen Hicks and Mr. Michael McCord, are now top DOD leaders.) Among its findings, the commission unanimously reported that the NDS now charges the military with facing “five credible challengers, including two major-power competitors, and three distinctly different geographic and operational environments.” The commission assessed that “[t]his being the case, a two-war force sizing construct makes more strategic sense today than at any previous point in the post-Cold War era.” In other words, “[s]imply put, the United States needs a larger force than it has today if it is to meet the objectives of the strategy.”⁴⁷

In addition to the increased strategic risk of not being able to execute the NDS within the desired time frame, the combination of an insufficient number of BCTs and a lower-than-required Army end strength has resulted in a higher-than-desired level of OPTEMPO. Assistant Deputy Chief of Staff,

G-3/5/7, Major General Sean Swindell recently stated that the Army had tried to reduce the demands on the force but that this “effort has been going in the opposite direction.”⁴⁸

Army Force Posture. The Army also has transitioned from a force with a third of its strength typically stationed overseas, as it was during the Cold War, to a force that is based mostly in the continental United States. An average of 311,870 troops were stationed in Europe from 1986 to 1990, and the majority were Army soldiers. When the Berlin Wall fell, that number plunged to 109,452 from 1996–2000,⁴⁹ and the numbers have continued to drop. In 2023, only two BCTs are permanently stationed overseas: the 173rd Airborne BCT in Italy and the 2nd Cavalry Regiment in Germany. The desire to find a “peace dividend” following the dissolution of the Soviet Union, combined with a reluctance to close bases in the United States, led to large-scale base closures and force reductions overseas. Even though the 2022 NDS places a high premium on how the Joint Force is postured, most of the Army remains in the U.S., thousands of miles from where it will be needed.

Among Army units that deploy periodically are Armored and Stryker Brigade Combat Teams (ABCTs) and Patriot Battalions that rotate to and from Europe, Kuwait, and Korea. Rather than relying on forward-stationed BCTs, the Army currently rotates ABCTs to Europe and Kuwait and Stryker BCTs to Korea on a “heel-to-toe” basis so that there is never a gap.

The Russia–Ukraine war has brought the question of stationing more Army forces in Europe back to the forefront. Joint Chiefs of Staff Chairman General Mark Milley has suggested that the U.S. should establish more permanent European bases and rotate more forces to the continent.⁵⁰ There is disagreement as to which represents the better option: rotated forces or forward-stationed forces.

- Proponents of rotational BCTs argue that they arrive fully trained, that they remain at a high state of readiness throughout their typically nine-month overseas rotation, and that the cost of providing for accompanying military families is avoided.
- Those who favor forward-stationed forces point to a lower overall cost (when their

equipment remains in place), forces that typically are more familiar with the operating environment, and a more reassuring presence for our allies.⁵¹

In reality, both types of force postures are needed, not only for the reasons mentioned, but also because the mechanisms by which a unit is deployed, received into theater, and integrated with the force stationed abroad should be practiced on a regular basis.

Capability

Capability in this context refers to the quality, performance, suitability, and age of the Army’s various types of combat equipment. In general, the Army is using equipment developed in the 1970s, fielded in the 1980s, and incrementally upgraded since then. This “modernization gap” was caused by several factors: the predominant focus on the wars in Iraq and Afghanistan since 9/11; pressures caused by budget cuts, especially those associated with the BCA; and failures in major modernization programs like the Future Combat System, Ground Combat Vehicle, and Crusader artillery system.

Army leaders today clearly view this situation as a serious challenge. General James Rainey, the head of Army Futures Command, has said that “[w]e need to approach 2040 with a sense of urgency now” because “[t]ransforming the Army to ensure war-winning future readiness...is the best guarantee that our successful materiel modernization efforts will produce lethal formations that will deter our enemies, and, if required, dominate the land domain in conflict.”⁵²

General McConville has similarly urged that “[w]e must transform the Army” and that “the time is now...to transform our doctrine, our organizations, our training...our equipment, and...how we compete around the world in order to protect the freedoms and the global order we enjoy today.” He further suggests “that about every 40 years, the Army transforms to meet the National Security threats of that time. We did it in 1940’s for World War II; we did it in 1980’s for the Cold War; we are doing it now in 2020 for the Great Power Competition environment that we live in.”⁵³

The Army has embarked on an ambitious program to modernize and hopes to put 24 new systems into the hands of soldiers in FY 2023. Among

these systems are hypersonic missiles, a precision strike missile, a directed energy air defense capability, and the Lower Tier Air and Missile Defense Sensor. These systems represent tangible progress.

Interested parties also should pay attention to additional areas other than the number of systems being fielded: the quantities of the systems being fielded and the times that will be required for the Army to reach their acquisition objectives for new equipment. Because of budget limitations, the initial quantities of systems being fielded are relatively modest: for example, 120 Precision Strike Missiles. Reaching the acquisition objective for other pieces of new equipment will take many years: for the Armored Multipurpose Vehicle, 25 years; the Joint Lightweight Tactical Vehicle, 23 years, and Mobile Protected Firepower, 14 years.⁵⁴

Loss of Competitive Advantage. These new modernization programs cannot come quickly enough. As an example of how Army equipment is falling behind that of our competitors, the Army Tactical Missile System (ATACMS), first introduced in 1991, is the Army's only ground-launched precision missile with a range greater than 100 kilometers (km). Because of restrictions in the Intermediate Range Nuclear Forces Treaty and other factors, it was limited to a maximum range of 300 km.

China and Russia have much more substantial inventories of conventional, precision, ground-launched missiles and rockets. China has nine major ground-launched missile systems and more than 425 launchers. These capable systems can range from 600 km (DF-11A and DF-15) to 4,000 km (DF-26).⁵⁵ Russia, on the other hand, at least before the war in Ukraine, had the widest inventory of missiles in the world: at least four conventional ground-launched missile systems that can range from 120 km (SS-21) to 2,500 km (SSC-8).⁵⁶ The Army plans to start fielding the Precision Strike Missile in the fourth quarter of 2023, but the initial quantities will be modest (120).⁵⁷

Another example of this loss in competitive advantage can be found in main battle tanks. When the M-1 Abrams was introduced in 1980, it was indisputably the world's best tank. Since then, Russia has developed—and before the Ukraine War was reportedly prepared to export—versions of its T-14 Armata tank, which has an unmanned turret, reinforced frontal armor, an information management system that controls all elements of the tank,

an active protection system, a circular Doppler radar, an option for a 155 mm gun, and 360-degree ultraviolet high-definition cameras.⁵⁸ Other defense assessments rate two other tanks—the German Leopard 2A7V and the South Korean K2 Black Panther—as superior to the M-1A2 SEP v3.⁵⁹

The point is not to pick the best tank in the world. Rather, the point is that although the M-1A2 SEP v3 (the most recent version) is a very good tank, the decisive advantage the U.S. once enjoyed in tank design has disappeared.

Similarly, the U.S. Army's Patriot Missile System is an excellent system, but countries such as Saudi Arabia, Turkey, and India have either purchased or recently expressed interest in buying the Russian competitor system, the S-400.⁶⁰ Why? Part of the answer lies in cost. The Patriot system is tremendously expensive; a Patriot battery (one-fourth of a battalion) costs about \$3 billion for the launchers and a basic load of missiles, and an S-400 battery has been estimated to cost \$500 million.⁶¹

Within the Army's inventory of equipment are thousands of combat systems, including small arms, trucks, aircraft, soldier-carried weapons, radios, tracked vehicles, artillery systems, missiles, and drones. The following sections provide updates with respect to some of the major systems as they pertain to Armored, Stryker, and Infantry BCTs and Combat Aviation Brigades.

Armored Brigade Combat Team (ABCT). The Armored BCT's role is to “close with the enemy by means of fire and movement to destroy or capture enemy forces, or to repel enemy attacks by fire, close combat, and counterattack to control land areas, including populations and resources.”⁶² The Abrams Main Battle Tank (most recent version in production: M1A2 SEPv3, first unit equipped in FY 2020⁶³) and Bradley Fighting Vehicle (most recent version: M2A4, first unit equipped in April 2022⁶⁴) are the primary Armored BCT combat platforms.

The M-1 tank and Bradley Fighting Vehicle first entered service in 1980 and 1981, respectively. There are 87 M-1 Abrams tanks and 152 Bradley Fighting Vehicle variants in an ABCT.⁶⁵ Despite upgrades, the M-1 tank and the Bradley are now at least 40 years old, and their replacements will not arrive until the platforms are at least 50 years old.

Optionally Manned Fighting Vehicle (OMFV). The Army's replacement program for the Bradley, the Optionally Manned Fighting Vehicle,

was on an aggressive timeline, but the Army cancelled the request for proposals (RFP) in January 2020 and rereleased an RFP for what it called a “concept design” in December 2020. Five teams were selected to come up with designs for the OMFV. The next milestone was in July 2022 when the government released a final RFP. An award for three contractors to produce detailed designs is expected in the second quarter of FY 2023,⁶⁶ and “[t]he Army then intends to select one vendor for Low-Rate Initial Production near the end of FY2027.”⁶⁷

Procurement funding for the OMFV does not yet appear in the Army’s FY 2024–FY 2029 program. Flat or declining funding such as the Army is currently experiencing could affect those plans.

A New Tank? A potential clean-sheet replacement for the M-1 tank is even farther down the road. Major General Glenn Dean, Program Officer, Ground Combat Systems, reportedly has said that “funding to pursue what could be next for Abrams would likely not appear in a budget cycle until fiscal 2025 at the earliest.”⁶⁸ Meanwhile, the Army has another upgrade for the Abrams platform in the works: the M1A2 SEPv4, which would incorporate a “3rd Generation Forward Looking Infrared (3GEN FLIR)” in addition to “new color cameras to the gunner/commander primary sights” as well as “an improved laser range finder, integration of a laser warning receiver system, improved lethality via Fire Control System (FCS) digital communication with a new Advanced Multi-Purpose round, improved accuracy via integration of a meteorological sensor, and improved onboard diagnostics.”⁶⁹ Fielding will begin in FY 2024.

Armored Multi-Purpose Vehicle (AMPV). The venerable M113 multi-purpose personnel carrier is also part of an ABCT and fills multiple roles such as mortar carrier and ambulance. It entered service in 1960 and is being replaced by the new Armored Multi-Purpose Vehicle (AMPV), which after numerous delays entered low-rate initial production on January 25, 2019. The system’s first fieldings took place on March 13, 2023.⁷⁰ The Army’s FY 2024 budget includes a request for procurement of 91 AMPVs. At that rate of procurement and given prior year procurements, it will take the Army at least 25 years from 2024 to meet its objective of 2,897 AMPVs by FY 2049.⁷¹

Stryker Brigade Combat Team (SBCT). The Stryker BCT “is an expeditionary combined arms

force organized around mounted infantry” and is able to “operate effectively in most terrain and weather conditions” because of its rapid strategic deployment and mobility.⁷² Stryker BCTs are equipped with approximately 321 eight-wheeled Stryker vehicles.⁷³ Relatively speaking, these vehicles are among the Army’s newest combat platforms, having entered service in 2001.

In response to an Operational Needs Statement, the Stryker BCT in Europe received Strykers fitted with a 30 mm cannon to provide an improved anti-armor capability.⁷⁴ Based on the success of that effort, the Army decided to outfit at least three of its SBCTs that are equipped with the Double V-hull, which affords better underbody protection against such threats as improvised explosive devices, with the 30 mm autocannon.⁷⁵ The next SBCT to receive the cannons (after the 2nd Cavalry Regiment) will be the 1-2 SBCT at Joint Base Lewis–McChord in Washington State; delivery was scheduled for July 2023.⁷⁶ The Army is also integrating Javelin anti-tank missiles on the Stryker platform and began to train crews on this capability in May 2022.⁷⁷

Infantry Brigade Combat Team (IBCT). The Infantry BCT “is an expeditionary, combined arms formation optimized for dismounted operations in *complex terrain*,” which the Army defines as “a geographical area consisting of an urban center larger than a village and/or of two or more types of restrictive terrain or environmental conditions occupying the same space.”⁷⁸ Infantry BCTs have fewer vehicles and rely on lighter platforms such as trucks; High Mobility Multipurpose Wheeled Vehicles (HMMWVs); and Joint Light Tactical Vehicles (JLTVs) for mobility.

Joint Light Tactical Vehicle (JLTV). The JLTV aspires to combine the protection offered by Mine Resistant Ambush Protected Vehicles (MRAPs) with the mobility of the original unarmored HMMWV. The vehicle features design improvements that increase its survivability against anti-armor weapons and improvised explosive devices (IEDs). The Army Procurement Objective is 49,099 trucks,⁷⁹ replacing about 50 percent of the current HMMWV fleet.

Requested FY 2024 funding of \$839.4 million would support procurement of 1,753 JLTVs and 848 trailers. This reflects an increase in funding (\$664.1 million was enacted for FY 2023), suggesting that the Army is recommitted to this program.

TABLE 9

Procurement of Select Army Systems Will Take Decades to Complete

System	Army Acquisition Objective	Funded Through FY 2024	Years Needed to Complete Army Fielding at FY 2024 Procurement Rate
Armored Multi-Purpose Vehicle (AMPV)	2,897	519	25
Joint Assault Bridge (JAB)	297	126	28
Mobile Protected Firepower (MPF)	504	33	15
Joint Lightweight Tactical Vehicle (JLTV)	49,099	6,365	24
Ground Mobility Vehicle	2,593	739	14

SOURCES: U.S. Department of the Army, *Department of Defense Fiscal Year (FY) 2024 Budget Estimates, Army, Justification Book Volume 1 of 1, Procurement of W&TCV, Army*, March 2023, pp. 1 and 12, <https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2024/Base%20Budget/Procurement/Procurement%20of%20Weapons%20and%20Tracked%20Combat%20Vehicles.pdf> (accessed September 14, 2023), and U.S. Department of the Army, *Department of Defense Fiscal Year (FY) 2024 Budget Estimates, Army, Justification Book Volume 1 of 3, Other Procurement, Army, Tactical and Support Vehicles, Budget Activity 1*, March 2023, p. 39 and 49, <https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2024/Base%20Budget/Procurement/Other%20Procurement%20-%20BA%201%20-%20Tactical%20&%20Support%20Vehicles.pdf> (accessed September 14, 2023).

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Considering the 4,612 JLTVs the Army has already procured⁸⁰ and procurement at a rate of 1,753 vehicles (the FY 2024 quantity), the Army will not reach its procurement objective of 49,099 for the JLTV until 2048, leaving it to rely on aging HMMWVs that began fielding in 1983.⁸¹

Mobile Protected Firepower (MPF). The Army has developed a light tank, previously called Mobile Protected Firepower and now officially named the M10 Booker, to provide IBCTs with the firepower to engage enemy armored vehicles and fortifications.⁸² In June 2022, the Army awarded General Dynamics Land Systems a contract for 96 MPF systems. The first units are expected to receive the M10 in the fourth quarter of FY 2025. The Army's acquisition objective is for 504 M10s, organized in battalions of 42 systems. The \$394.6 million requested in the FY 2024 budget will acquire 33 systems.⁸³ At that rate of procurement, the Army will meet its objective in FY 2038.

Ground Mobility Vehicle (GMV). Airborne BCTs are the first IBCTs to receive a new platform to increase their speed and mobility. The GMV (also referred to as the Infantry Squad Vehicle) provides

enhanced tactical mobility for an IBCT nine-soldier infantry squad with their associated equipment. GM Defense was selected for the production contract in June 2020. The Army has approved a procurement objective of 11 IBCT sets at 59 vehicles per IBCT for a total of 649 vehicles. The approved Army acquisition objective is 2,593. Given prior procured quantities of 596 and at the procurement rate of 143 per year, the Army will reach its acquisition objective in FY 2037.⁸⁴

Combat Aviation Brigade. CABs are composed of AH-64 Apache attack, UH-60 Black Hawk medium-lift, and CH-47 Chinook heavy-lift helicopters. The Army has been methodically upgrading these fleets for decades, but the FY 2024 budget request continues the reduction in legacy aircraft procurement that began in FY 2022, presumably to create “budget room” for the planned introduction of two new aircraft: the Future Long-Range Assault Aircraft (FLRAA) and Future Attack Reconnaissance Aircraft (FARA). This is a continued reflection of downward budget pressure and incurs additional risk for the Army as its legacy helicopters are expected to be around for decades.

UH/HH-60. The acquisition objective for the H-60 medium-lift helicopter is 1,375 H-60Ms and 760 recapitalized 60-A/L/Vs for a total of 2,135 aircraft. The FY 2024 procurement request for the UH-60M is \$760.7 million, which would support the procurement of 24 aircraft, 11 less than the 35 that were funded in FY 2023. The FY 2024 budget request reflects planned UH-60 procurement in FY 2026.⁸⁵

CH-47. The CH-47F Chinook, a rebuilt variant of the Army's CH-47D heavy-lift helicopter, has an acquisition objective of 535 aircraft and, with no planned replacement on the horizon, is expected to remain the Army's heavy-lift helicopter for the foreseeable future. The FY 2024 budget request of \$221.4 million would support the service life extension of six aircraft, as well as retrofits, all of which would be for the MH-47G special operations model.⁸⁶

AH-64. The AH-64E heavy attack helicopter has an Army acquisition objective of 812 aircraft (a combination of remanufactured and new build), which is being met by the building of new aircraft and remanufacturing of older AH-64 models. The \$828.9 million FY 2024 procurement request would support the purchase of 42 AH-64E aircraft, nine more than the 33 funded in FY 2023 budget.⁸⁷

Overall, the Army's equipment inventory, while increasingly dated, is maintained well. Under its current modernization plans, "the Army envisions [the M-1 Abrams Tank, M-2/M-3 Bradley Fighting Vehicle (BFV), and M-1126 Stryker Combat Vehicle] to be in service with Active and National Guard forces beyond FY2028."⁸⁸

Future Programs and Efforts. In addition to seeing to the viability of today's equipment, the military must look to the health of future equipment programs. Although future modernization programs do not represent current hard-power capabilities that can be applied against an enemy force today, they are a leading indicator of a service's overall fitness for future sustained combat operations. In future years, the service could be forced to engage an enemy 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 20 years of a singular focus on counter-insurgency followed by concentration on the current readiness of the force, the Army is now playing catch-up in equipment modernization.

New Organizations and Emphasis on Modernization. In 2017, the Army established eight cross-functional teams (CFTs) to improve the management of its top modernization priorities, and in 2018, it established a new four-star headquarters, Army Futures Command, to lead modernization efforts.⁸⁹ In 2023 the Army announced the creation of a new Cross Functional Team to handle logistics.⁹⁰

Even though it has been six years, it is still too early to assess whether these new structures, commands, and emphasis will result in long-term improvement in the Army's modernization posture. The Army aspires to develop and procure an entire new generation of equipment based on its six modernization priorities: "long range precision fires, next generation combat vehicles, future vertical lift, network, air and missile defense, and Soldier lethality."⁹¹

Although the Army has put in place new organizations, plans, and strategies to manage modernization, the future is uncertain, and Army programs remain in a fragile state with only a few in an active procurement status. The Army has shown great willingness to make tough choices and reallocate funding toward its modernization programs, but this has usually been at the expense of end strength or reduction in the total quantity of new items purchased.

As budget challenges such as nuclear deterrence programs, inflation, rising personnel costs, health care, and the need to invest in programs to respond to China's increasingly aggressive activities continue to present themselves, the Army desperately needs time and funding to modernize its inventory of equipment. Recent modernization programs seem to be on track except for the Extended Range Cannon program,⁹² the Improved Turbine Engine Program,⁹³ and the Integrated Visual Augmentation System,⁹⁴ all of which have suffered some setbacks. The Army also is experiencing some success, one example being the number of Stryker vehicle-mounted Maneuver Short Range Air Defense

(M-SHORAD) systems that have been delivered to Europe.⁹⁵ Army officials are currently optimistic about future fielding dates for equipment like the hypersonic weapon firing battery and the Precision Strike Missile, both of which are scheduled to begin delivery in FY 2023, but their success will depend on sustained funding.

Readiness

BCT Readiness. Over the past four years, the Army has made steady progress in increasing the readiness of its forces. Its goal is to have 66 percent of the Regular Army and 33 percent of National Guard BCTs “at the highest levels of readiness.”⁹⁶

As of July 14, 2023, the Army reported that “83 percent of Active Component Brigade Combat Teams are at the highest levels of tactical readiness.”⁹⁷ This is 17 percentage points above its goal and two percentage points above last year’s reported level. This means that 25 of the Army’s 31 active BCTs were at either C1 or C2, the two highest levels of tactical readiness, and ready to perform all or most of their wartime missions immediately. The *2023 Index* reported that 25 Regular Army BCTs were at the highest levels of readiness.

There also are 27 BCTs in the Army National Guard: five Armor, 20 Infantry, and two Stryker. The Army has allocated two Combat Training Center (CTC) rotations for two National Guard BCTs. These two BCTs “are resourced to achieve company-level proficiency, while the remaining 25 BCTs and enabler units are on a path to platoon minus-level proficiency and will meet Directed Readiness Table requirements.”⁹⁸ These training levels usually reveal the extent to which additional training time would be required before the unit could be deployed. Given the paucity of data provided by the Army, it is hard to assess the current readiness of ARNG units.

Steady Decline in Training Resources. When measuring resourcing for the training of Brigade Combat Teams, the Army formerly used full-spectrum training miles (FSTMs), representing the number of miles that formations are resourced to drive their primary vehicles on an annual basis. In FY 2024, the Army changed the terminology to Composite Training Miles but explained that they are the same thing. Since FY 2019, these training resources have been declining. In FY 2021, the Army budgeted 1,598 FSTMs to train BCTs to 100 percent of the requirement.⁹⁹ According to the Army’s FY 2024

budget justification exhibits, only 1,137 Composite Training Miles are funded for non-deployed units. This is a cut of 28 percent, suggesting that unless the Army’s training strategy radically changed, *BCTs are funded only to 72 percent of the training requirement.*

For Combat Aviation Brigades, the Army uses hours per crew per month (H/C/M), which reflects the number of hours that aviation crews can fly their helicopters per month. The 9.2 flying hours budgeted in the FY 2024 request are 13 percent lower than the 10.6 active flying hours per crew per month enacted in the FY 2023 budget.¹⁰⁰

Uncertain Training Level Goals. Starting with the FY 2022 budget justification books, the Army began to omit the Unit Proficiency Level Goal, which for years has been to train a BCT to operate as a BCT; it is likely now training to act as a battalion or company. This implies that brigade combat teams will not be effective in executing brigade-level or brigade-size tasks if called into action. Having competent companies or battalions is one thing; being able to orchestrate their actions to achieve higher-order tactical and operational tasks is much different.

CTC Rotations. The Army uses Combat Training Centers to train its forces to desired levels of proficiency. Specifically, this important program “provide[s] realistic joint and combined arms training...approximating actual combat” and increases “unit readiness for deployment and warfighting.”¹⁰¹ For FY 2024, the Army is resourcing 22 CTC rotations: eight at the National Training Center, eight at the Joint Readiness Training Center, four at the Joint Multinational Readiness Center, and two exportable rotations. Two of these 22 rotations are for Army National Guard Brigades.¹⁰²

New Readiness Model. The Army has transitioned from one readiness model to another. Its Sustainable Readiness Model, implementation of which began in 2017, was intended to give units more predictability. Its new Regionally Aligned Readiness and Modernization Model (ReARMM) is designed to “better balance operational tempo (OPTEMPO) with dedicated periods for conducting missions, training, and modernization.”¹⁰³ ReARMM features units that spend eight months in a modernization-training-mission cycle while preparing to deploy to a specific part of the world. The Army shifted to this new model on October 1, 2021.¹⁰⁴ Since announcing the model in 2021, the Army has been silent on the topic.

In general, the Army continues to be challenged by structural readiness problems as evidenced by too small a force attempting to satisfy too many global presence requirements and Operations Plan (OPLAN) warfighting requirements. If demand is

not reduced, the funding cuts and end strength reduction featured in the FY 2023 budget submission and continued in the FY 2024 submission can be expected to result in a continued decline in readiness.

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 (MRC). 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 approximately 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 and 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.¹⁰⁵ Taking into account the need for a strategic reserve, the Army force should also include an additional 20 percent of the 42 BCTs, resulting in an overall requirement of 50 BCTs.

Previous editions of the *Index of U.S. Military Strength* counted a small number of Army National Guard BCTs in the overall count of available BCTs. Because the Army no longer makes mention of Army National Guard BCTs at the highest state of readiness, they are no longer counted in this edition of the *Index*. The Army has 31 Regular Army BCTs compared to a two-MRC construct requirement of 50. The Army's overall capacity score therefore remains unchanged from 2022.

- **Two-MRC Benchmark:** 50 Brigade Combat Teams.
- **Actual FY 2022 Level:** 31 Regular Army Brigade Combat Teams.

The Army's current BCT capacity equals 62 percent of the two-MRC benchmark and is therefore 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 is scored "weak" for "Capability of Equipment."

Despite modest progress with the JLTV, M10 Booker, Ground Mobility Vehicle, and AMPV programs, and in spite of such promising developments as creation of Army Futures Command, CFTs, and the initiation of new Research, Development, Testing and Evaluation (RDTE) funded programs, nearly all new Army equipment programs remain in the development phase and in most cases are at least a year from being fielded. FY 2024 requested funding levels for procurement and research and development are down 8 percent compared to the FY 2023 enacted levels, which further slows the pace of Army equipping and reduces the speed of procurement to below industry's minimum sustainment rates in some cases. The result of the FY 2024 budget request would be an Army that is aging faster than it is modernizing.

Readiness Score: Very Strong

The Army reports that 83 percent of its 31 Regular Army BCTs are at the highest state of readiness.¹⁰⁶ The Army's internal requirement is for "66 percent...of the active component BCTs [to be] at the highest readiness levels."¹⁰⁷ Using the assessment methods of this *Index*, this results in a percentage of service requirement of 100 percent, or "very strong."

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 unweighted average is 3.33; thus, the overall Army score is “marginal.”

This was derived from the aggregate score for capacity (“weak”); capability (“marginal”); and readiness (“very strong”). This score is the same as the assessment of the *2023 Index*, which rated the Army as “marginal” overall.

U.S. Military Power: Army

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

ARMY SCORES



Procurement and Spending ■ Through FY 2023 ■ Pending

Main Battle Tank

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>M1A1/2 Abrams</p> <p>Inventory: 540/1,605 Fleet age: 21/14 Date: 1980/1993</p> <p>The Abrams is the Army's primary ground combat system and main battle tank in its Armored Brigade Combat Teams (ABCTs). It is a tracked, low-profile, land combat assault weapon that provides mobility, lethal firepower, and protection. The Abrams has gone through several remanufacture programs to extend its life expectancy to 2045.</p>	3	4	<p>Decisive Lethality Platform (DLP)</p> <p>The DLP program, in its earliest stages of conceptualization, is a notional manned or unmanned vehicle that could replace some or all of the Abrams tanks. This program is part of the Next Generation Combat Vehicle (NGCV) program, which is number two among the Army's "Big Six" modernization priorities. The earliest a replacement for the Abrams tank could conceivably be introduced is sometime in 2033.</p>		

Infantry Fighting Vehicle

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>M2 Bradley</p> <p>Inventory: 3,721 Fleet age: 23 Date: 1981</p> <p>The Bradley is a fully tracked, lightly armored vehicle meant to transport infantry by providing protection from artillery and employing mounted firepower. The Bradley complements the Abrams tank in Armored Brigade Combat Teams (ABCTs). The Bradley has undergone remanufacture programs to extend its life expectancy to 2045.</p>	2	3	<p>Optionally Manned Fighting Vehicle (OMFV)</p> <p>The XM30 Mechanized Infantry Combat Vehicle is intended to replace the M2-Bradley Infantry Fighting Vehicle (IFV) and in its objective state will have the ability to conduct remotely controlled operations. The vehicle will include a hybrid-electric engine; a remotely operated cannon (in the objective state 50 mm); machine guns; anti-tank guided missiles; an advanced third-generation forward-looking infrared sensor; "intelligent fire control"; integrated active protection systems; kitted armor; and advanced signature management capabilities. In 2021, the Army awarded five firm fixed-price contracts as part of the XM30 Concept Design Phase where competing firms were asked to develop digital designs. In June 2023, the U.S. Army chose General Dynamics Land Systems and American Rheinmetall to move forward to the detailed design phase. Both companies will produce 11 prototypes for testing in the first quarter of 2025. The Army will choose a winning design in 2027 and begin fielding in 2029. This program is part of the Next Generation Combat Vehicle (NGCV) program, which is number two among the Army's "Big Six" modernization priorities. The Army plans for the first unit to be equipped by FY 2029.</p>		

NOTE: See page 429 for details on fleet ages, dates, and procurement spending.

ARMY SCORES



Procurement and Spending ■ Through FY 2023 ■ Pending

Armored Fighting Vehicle

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>Stryker</p> <p>Inventory: 4,223 Fleet age: 16.5 Date: 2001</p> <p>The Stryker is a wheeled vehicle that is the main platform in 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 because of technology and cost hurdles. The original Stryker is being replaced with Double-V-Hull variants. The Double V Hull provides increased under-vehicle blast protection. The Stryker is expected to remain in service for 30-plus years.</p>	4	4	None		

Armored Personnel Carrier

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>M113 Armored Personnel Carrier</p> <p>Inventory: 4,800 Fleet age: 40 Date: 1960</p> <p>The fully tracked M113 personnel carrier serves in a supporting role for Armored Brigade Combat Teams (ABCTs) and in units above brigade level. As the first mass-produced aluminum combat vehicle, the M113 was made to protect against small-arms fire while being light enough to be transportable. The Army planned to replace the M113 with the Armored Multi-Purpose Vehicle, but due to reduced production rates and higher commodity prices, the cost per vehicle has increased, and the replacement program will take an extended period of time. Plans are to use the current platform until 2045.</p>	1	1	<p>Armored Multi-Purpose Vehicle (AMPV)</p> <p>Timeline: 2018-TBD</p> <p>The AMPV has been adapted from the Bradley Fighting Vehicle, which largely allowed the program to bypass an extensive technology development phase. The fleet will consist of five variants. Although total AMPV production remains behind schedule due to early manufacturing troubles, AMPV production rates reportedly are planned to increase to 131 vehicles per year by FY 2024 and to continue at that rate until at least 2027.</p>	2	3

PROCUREMENT	SPENDING (\$ millions)

Light Wheeled Vehicle

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>HMMWV</p> <p>Inventory: 106,767 Fleet age: 20.5 Date: 1985</p> <p>The High Mobility Multipurpose Wheeled Vehicle (HMMWV) is a lightweight, highly mobile, high-performance wheeled vehicle used for a variety of purposes in combat or combat support services units. Its expected life span is 15 years. A portion of the HMMWV fleet is being slowly replaced by the Joint Light Tactical Vehicle (JLTV).</p>	1	1	<p>Joint Light Tactical Vehicle (JLTV)</p> <p>Timeline: 2015-2036</p> <p>The JLTV vehicle program is an Army-led, joint-service program that is replacing a portion of the Army's HMMWVs with armored tactical wheeled vehicles. The JLTV provides improved protection, reliability, maneuverability, and survivability of vehicles. In June 2019, the Army approved the JLTV for full-rate production. Production is underway, although current budget shortfalls have forced the Army to reduce procurement quantities.</p>	3	4

PROCUREMENT	SPENDING (\$ millions)

NOTE: See page 429 for details on fleet ages, dates, timelines, and procurement spending.

ARMY SCORES



Procurement and Spending ■ Through FY 2023 ■ Pending

Attack Helicopter

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>AH-64 D Apache</p> <p>Inventory: 250 Fleet age: 18.5 Date: 1997</p> <p>The Apache attack helicopter is designed to support Brigade Combat Teams (BCTs) as well as independent operations in the full spectrum of modern warfare including destroying armor, personnel, and material targets. The Apache has a modular open systems architecture that allows it to incorporate the latest communications, navigation, sensor, and weapon systems. Its expected life cycle is about 20 years.</p>	2	3	<p>AH-64E Reman</p> <p>Timeline: 2010–2025</p> <p>The AH-64E Reman (short for remanufactured) is a program to remanufacture older Apache helicopters into the more advanced AH-64E version, which is fully digital and meets the Army's joint interoperability goals for the future. The AH-64E has a new airframe and can carry modern munitions, including the JAGM missile, giving it significant combat capability as the Army's only heavy attack helicopter.</p> <p>PROCUREMENT* SPENDING* (\$ millions)</p> <p>545 73 \$9,040 \$1,298</p>	3	5
<p>AH-64E</p> <p>Inventory: 490 Fleet age: 5.5 Date: 2012</p> <p>The AH-64E variant is a remanufactured or newly built version of the AH-64D Apache attack helicopter with substantial upgrades in powerplant, avionics, communications, and weapons capabilities that make it the Army's most advanced attack helicopter. Its expected life cycle is about 20 years. The Army began procurement of the remanufactured version in 2010 and will conclude procurement in 2025.</p>	5	5	<p>AH-64E New Build</p> <p>Timeline: 2010-2027</p> <p>The AH-64E New Build program produces new build rather than rebuilt Apaches. The program is meant to modernize and sustain the current Apache inventory. The AH-64E has more modern and interoperable systems and is able to carry modern munitions, including the JAGM missile. Budget cuts in the 2022 request will likely close the AH-64E New Build line because the need for all-new components makes the cost of procurement significantly higher.</p> <p>PROCUREMENT* SPENDING* (\$ millions)</p> <p>81 0 \$2,139</p>	3	5

* Additional procurement expected.

NOTE: See page 429 for details on fleet ages, dates, timelines, and procurement spending.

ARMY SCORES



Procurement and Spending ■ Through FY 2023 ■ Pending

Medium Lift

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>UH-60A Black Hawk</p> <p>Inventory: 20 Fleet age: 40.5 Date: 1978</p> <p>The UH-60A is the Army's primary medium-lift utility transport helicopter that provides air assault and aeromedical evacuation and supports special operations. Its expected life span is about 25 years. This variant of the Black Hawk is being replaced by the newer UH-60M variant.</p>	1	1	<p>UH-60M Black Hawk</p> <p>Timeline: 2004-TBD</p> <p>The UH-60M, which began full production in 2007, serves to modernize and replace current Black Hawk inventories. The newer M-variant is a digital networked platform that will improve the Black Hawk's range and lift by upgrading its rotor blades, engine, and computers.</p>	3	5
<p>UH-60M Black Hawk</p> <p>Inventory: 931 Fleet age: 9 Date: 2005</p> <p>The UH-60M is the modernized version of the original UH-60A Black Hawk helicopter. It has multiple upgrades including multi-mission capabilities, a new airframe, advanced digital avionics, and a powerful propulsion system. As the UH-60A is retired, the M-variant will be the main medium-lift rotorcraft used by the Army until it is replaced by the FLRAA. The UH-60M is expected to remain in service at least until 2040.</p>	5	5	<p>PROCUREMENT*</p> <p>1,231 74</p> <p>SPENDING* (\$ millions)</p> <p>\$18,678 \$2,264</p>		

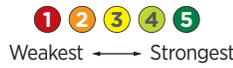
Heavy Lift

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>CH-47F Chinook</p> <p>Inventory: 450 Fleet age: 10.5 Date: 2002</p> <p>The F-variant of the CH-47 Chinook heavy-lift helicopter includes a new digital cockpit and monolithic airframe to reduce vibrations. It transports forces and equipment while providing such other functions as parachute drops and aircraft recovery. Its expected life span is 35 years. The Army plans to use the CH-47F at least until the late 2040s.</p>	5	5	<p>CH-47F</p> <p>Timeline: 2001-TBD</p> <p>Currently in production, the CH-47F program is intended to keep the fleet of heavy-lift rotorcraft viable for use in modern combat as older variants of the CH-47, notably the CH-47D, are retired. The program includes both remanufactured and new builds of CH-47s. The F-variant has engine and airframe upgrades to lower its maintenance requirements. Total procurement numbers include the MH-47G configuration, which is used by U.S. Special Operations Command.</p>	3	5
			<p>PROCUREMENT*</p> <p>200 26</p> <p>SPENDING* (\$ millions)</p> <p>\$5,207 \$1,006</p>		

* Additional procurement expected.

NOTE: See page 429 for details on fleet ages, dates, timelines, and procurement spending.

ARMY SCORES



Procurement and Spending ■ Through FY 2023 ■ Pending

Intelligence, Surveillance, and Reconnaissance (ISR)

PLATFORM	Age Score	Capability Score	REPLACEMENT PROGRAM	Size Score	Health Score
<p>MQ-1C Gray Eagle</p> <p>Inventory: 180 Fleet age: 0.5 Date: 2011</p> <p>The Gray Eagle is a medium-altitude long-endurance (MALE) unmanned aerial vehicle (UAV) used to conduct intelligence, surveillance, and reconnaissance (ISR) missions. It offers better range, altitude, and payload flexibility than earlier systems. The Army has no plans to add to the 12 Gray Eagles that it procured in 2023.</p>	4	4	<p>MQ-1C Gray Eagle</p> <p>Timeline: 2010–2023</p> <p>The MQ-1C UAV is an unmanned aircraft system that provides the Army with reconnaissance, surveillance, and target acquisition capabilities. The Army did not plan to procure new MQ-1Cs for FY 2023.</p>	5	5
			<p>PROCUREMENT</p> <p style="text-align: center;">298</p>	<p>SPENDING (\$ millions)</p> <p style="text-align: center;">\$565 \$40</p>	

* Additional procurement expected.

NOTES: See Methodology for descriptions of scores. Fleet age is the average between the first and last years of delivery. The date is the year of first delivery. The timeline is from the first year of procurement to the last year of delivery/procurement. Spending does not include advanced procurement or research, development, test, and evaluation (RDT&E).

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