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Defense Primer: United States Airpower

Almost since the invention of heavier-than-air flight, control of the air has been seen as a military advantage. Over time, the United States has come to treat air superiority as a necessity, and built such capable air forces that no enemy aircraft has killed U.S. ground troops since 1953.

Modern airpower is able to provide a full range of effects, from strategic operations at intercontinental ranges to direct support of troops in combat. Today, every branch of the U.S. military employs air forces for various purposes, employing nearly 14,000 aircraft.

Figure 1. U.S. Air Forces, 2016-2025

Inventory	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Fighter / Attack	3290	3224	3190	3183	3215	3109	3108	3074	3060	2985
Attack Helicopter	859	774	727	715	736	763	801	797	799	810
Airlift / Cargo / Utility	4563	4623	4727	4760	4752	4715	4705	4696	4676	4618
Combat Search and Rescue	152	156	156	160	160	149	147	150	149	149
Air Refueling	542	555	557	560	560	560	559	563	563	563
Long Range Strike	157	157	157	157	157	157	154	150	146	140
Anti-Surface/Submarine Warfare	622	649	666	647	655	658	644	642	640	637
Trainers	2165	2113	2044	1999	1884	1853	1851	1842	1807	1779
ISR / Scout / C4	1063	1037	892	894	850	849	816	812	810	807
Special Operations Forces	494	487	470	473	474	455	457	457	457	457
Total	13907	13775	13586	13548	13443	13268	13242	13183	13107	12945

Source: Department of Defense, *Annual Aviation Inventory and Funding Plan, Fiscal Years (FY) 2016-2045*, April 2015.

The United States Air Force

The bulk of U.S. airpower resides in the U.S. Air Force (USAF). With 501,500 active and reserve personnel and more than 5,000 aircraft, the USAF provides the capability to reach, observe, strike and/or carry people and materiel to any point on the globe. Four of the Air Force's five core missions directly involve applying airpower.

Table 1. Air Force Core Missions

<ul style="list-style-type: none">Air and Space SuperiorityIntelligence, Surveillance, and ReconnaissanceRapid Global MobilityGlobal StrikeCommand and Control
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Source: U.S. Air Force, *Global Vigilance, Global Reach, Global Power for America* at <http://www.af.mil/Airpower4America.aspx>.

The Air Force fleet covers the full range of aerial capabilities, from fighters to intelligence aircraft, bombers, transports, and helicopters. Moreover, USAF airpower enables other military services to apply their forces directly. USAF cargo planes get Army and Marine troops and equipment to the battlefield, and aeromedical transport rapidly evacuates and treats injured troops. Air Force aerial reconnaissance assets give joint commanders real-time strategic and tactical intelligence. USAF tankers make

worldwide deployments by joint and allied forces possible. And Air Force assets work directly with ground units to provide weapons on target when and where needed, and to secure them against attack from the air.

Taken together, the Air Force sums up its core missions as providing "Global Vigilance, Global Reach, and Global Power."

Army Aviation

Helicopters capable of accompanying troops to provide tactical airlift, intelligence, surveillance, and reconnaissance (ISR), and supporting fires form the backbone of Army aviation, about 3,600 of its more than 4,600 aircraft. The service also operates light transport, special operations, and intratheater airlift aircraft. The USAF provides heavy transport and longer-range missions.

Naval Aviation

The U.S. Navy operates more than 2,500 aircraft (including about 900 fighters) in 10 air wings. Their unique asset is the ability to take their operating bases with them, as the Navy's 11 aircraft carriers (each with about 40 fighters plus other air assets) provide U.S. presence and operational capability far from home. Naval air assets are optimized for strike, ISR, and fleet defense.

Marine Corps Aviation

The nearly 1,200 Marine Corps aircraft (including just over 400 fighters) operate from Navy ships, Marine amphibious ships, and land bases, including expeditionary land bases with short runways. Some Marine Corps tactical aircraft are capable of vertical/short takeoff and landing, a useful capability because Marine aircraft are deployed and operated as part of Marine air/ground task forces, in which aviation is integrated into the unit.

Fighting as One

While the military services offer different capabilities and provide the equipment, personnel, and training, under current joint operations doctrine, they fight as one force. A joint air component commander oversees all airpower in a given campaign, assigning targets and allocating forces as needs warrant, without regard for the service that owns a particular capability.

Major Procurement Programs

The largest current DOD programs include the following:

- The **F-35 Lightning II** strike fighter, a multi-service, multi-national program slated to acquire 2,443 jets for the USAF, Navy, and Marine Corps.
- The **KC-46 tanker**, 179 of which are scheduled to replace 50-year-old Air Force KC-135s.

- The **B-21 Raider** bomber, about 100 of which are expected to enter USAF service in the mid-2020s, replacing 1980s-era B-1s and B-2s.
- The Navy continues to procure the **F/A-18E/F Super Hornet** multirole fighter and its electronic warfare variant, the EA-18G Growler.
- The main Army aviation procurement, as has been the case for many years, is for more **UH-60 Black Hawk** helicopters to move cargo and troops.

Relevant Statutes

Title 10, U.S. Code, Chapter 803 – Department of the Air Force

Title 10, U.S. Code, Chapter 303 – Department of the Army

Title 10, U.S. Code, Chapter 503 – Department of the Navy

Title 50, U.S. Code, Chapter 44 – National Security

CRS Products

CRS Report R44305, *The Air Force Aviation Investment Challenge*, by Jeremiah Gertler

CRS Report R43049, *U.S. Air Force Bomber Sustainment and Modernization: Background and Issues for Congress*, by Jeremiah Gertler

CRS In Focus IF10486, *Defense Primer: Naval Forces*, by Ronald O'Rourke

CRS In Focus IF10547, *Defense Primer: The United States Air Force*, by Jeremiah Gertler

Other Resources

Department of Defense. *Annual Aviation Inventory and Funding Plan, Fiscal Years (FY) 2016-2045*, April 2015.

USAF. *Global Vigilance, Global Reach, Global Power*, September, 2013.

U.S. Navy. *Naval Aviation's Role: Supporting the Six Core Capabilities*, January 2010.

DOD. Joint Publication 3-30, *Command and Control of Joint Air Operations*, February 10, 2014

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