

NAVAL AVIATION 2025



PREPARED AND PRESENTED BY
COMMANDER, NAVAL AIR FORCES
NAS NORTH ISLAND, CORONADO CA



TABLE OF CONTENTS

03	LETTER TO NAVAL AVIATION
04	EXPANDING THE WARFIGHTING ECOSYSTEM
05	U.S. PACIFIC FLEET "FLEET ORDERS"
06	THE INDISPENSABLE AIRCRAFT CARRIER AND AIR WING
08	DEPLOYED NAVAL FORCES
09	DEPLOYED NAVAL ALLIES
10	NIMITZ TO FORD CARRIERS, 50 YEARS OF WINNING
11	FORD-CLASS
12	CARRIER AND AIR WING 2025-2040
13	WEAPONS
14	TODAY'S CARRIER AIR WING
16	4 TH AND 5 TH GENERATION PLATFORMS
17	AIRBORNE ELECTRONIC ATTACK
18	CARRIER ON BOARD DELIVERY MISSION
19	ROTARY WING
20	MARITIME PATROL AND RECONNAISSANCE
21	MQ-4C TRITON
22	AIRBORNE COMMAND AND CONTROL
23	MQ-25 WILL FLY IN 2025
24	TAKE CHARGE AND MOVE OUT
26	CNAF PLACEMAT
28	HIGH END TRAINING
29	NAVAL AVIATION WARFIGHTING DEVELOPMENT CENTER (NAWDC)
30	FUTURE STRIKE FIGHTERS
31	MAINTENANCE OPERATIONS CENTER
32	CHIEF OF NAVAL AIR TRAINING 2040
34	OPERATING SAFELY
35	TREATMENT OF SAILORS
36	FLEET MANNING
37	AVIATION SAILORS
38	NAVAL AIR FORCE RESERVE
39	NAVAL ASTRONAUT PROGRAM
40	ACTIVE-DUTY U.S. NAVY ASTRONAUTS
41	FORMER U.S. NAVY ASTRONAUTS
42	U.S. NAVY 250 TH BIRTHDAY
43	WHO WE ARE

MISSION: DELIVER COMBAT-READY NAVAL AIR FORCES THAT WIN



THIS COMMUNICATION PLAYBOOK IS DESIGNED TO ALIGN OUR MESSAGING WITH THE NAVY AND JOINT FORCES.

WHAT WE DO IS CRITICAL TO OUR NATION. TO ENSURE SEA CONTROL, WE MUST PROVIDE THE AIR SUPERIORITY REQUIRED. THIS WILL PROVIDE THE NAVY WITH A FLEXIBLE, ADAPTABLE, AND LETHAL FORCE TO PRESERVE PEACE, RESPOND IN CRISES, AND WIN DECISIVELY IN COMBAT.

WE WILL RELENTLESSLY FOCUS AND PRIORITIZE WARFIGHTING AND WARFIGHTERS, AND WE WILL GUARD THEIR TIME TO PRIORITIZE WARFIGHTING. WE WILL TREAT THEM RIGHT BY REDUCING DISTRACTIONS AND REDUCING MISHAPS, HELPING THEM TO BE READY.

WE MUST TRACK ALL EFFORTS TO JANUARY 2027. WE SERVE, WE EXCEL, AND WE MAKE A DIFFERENCE. I VALUE EACH MEMBER OF OUR TEAM AND ASK ALL TO TRANSPARENTLY COMMUNICATE TRUTHS WHILE WORKING AS A TEAM AND TRUSTING EACH OTHER.

FLY NAVY, PREPARE TO WIN.

VADM DAN "UNDRA" CHEEVER
AIR BOSS #10

EXPANDING WARFIGHTING

Key Capabilities

- Long-Range Fires - how we shoot
- Terminal Defense – how we defend
- Counter-C5ISR – how we maneuver
- Contested Logistics – how we sustain
- Non-Traditional Sea Denial - how we deny

Key Enablers

- Artificial Intelligence – how we out think
- Robotic and Autonomous Systems – how we scale
- Live, Virtual, and Constructive Training – how we train
- Navy Operational Architecture – how we communicate

U.S. PACIFIC FLEET "FLEET ORDERS"

PROFESSIONALISM



"PROFESSIONALISM FORMS THE FOUNDATION OF ANY ELITE ORGANIZATION. IT IS CHARACTERIZED BY A CULTURE OF EXCELLENCE COUPLED WITH A STRICT ADHERENCE TO A SHARED CODE OF CONDUCT."

COMBAT READINESS



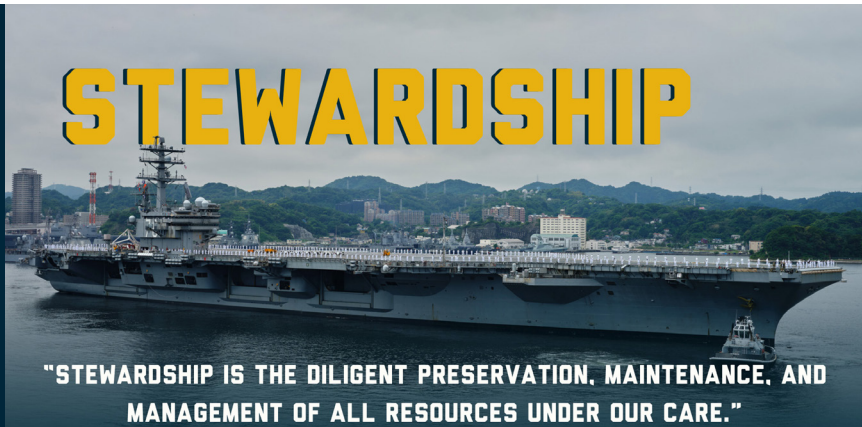
"PACIFIC FLEET'S COMBAT READINESS IS A CORNERSTONE OF OUR NATIONAL SECURITY AND CRITICAL TO DETERRING OUR ADVERSARIES."

SAFETY



"OUR PROFESSIONAL SAFETY CULTURE IS A FLEET FUNDAMENTAL THAT MUST BE INGRAINED AND FOSTERED THROUGH PROFESSIONAL BEHAVIOR AT ALL RANKS AND DISCIPLINED LEADERSHIP BY EXAMPLE."

STEWARDSHIP



"STEWARDSHIP IS THE DILIGENT PRESERVATION, MAINTENANCE, AND MANAGEMENT OF ALL RESOURCES UNDER OUR CARE."

THE INDISPENSABLE AIRCRAFT

The Carrier Strike Group (CSG) defines Navy power and projection to deter conflict and strike decisively when called upon. Reliable for decades and modernized for many years to come, the CSG presents a complicated target for the enemy.

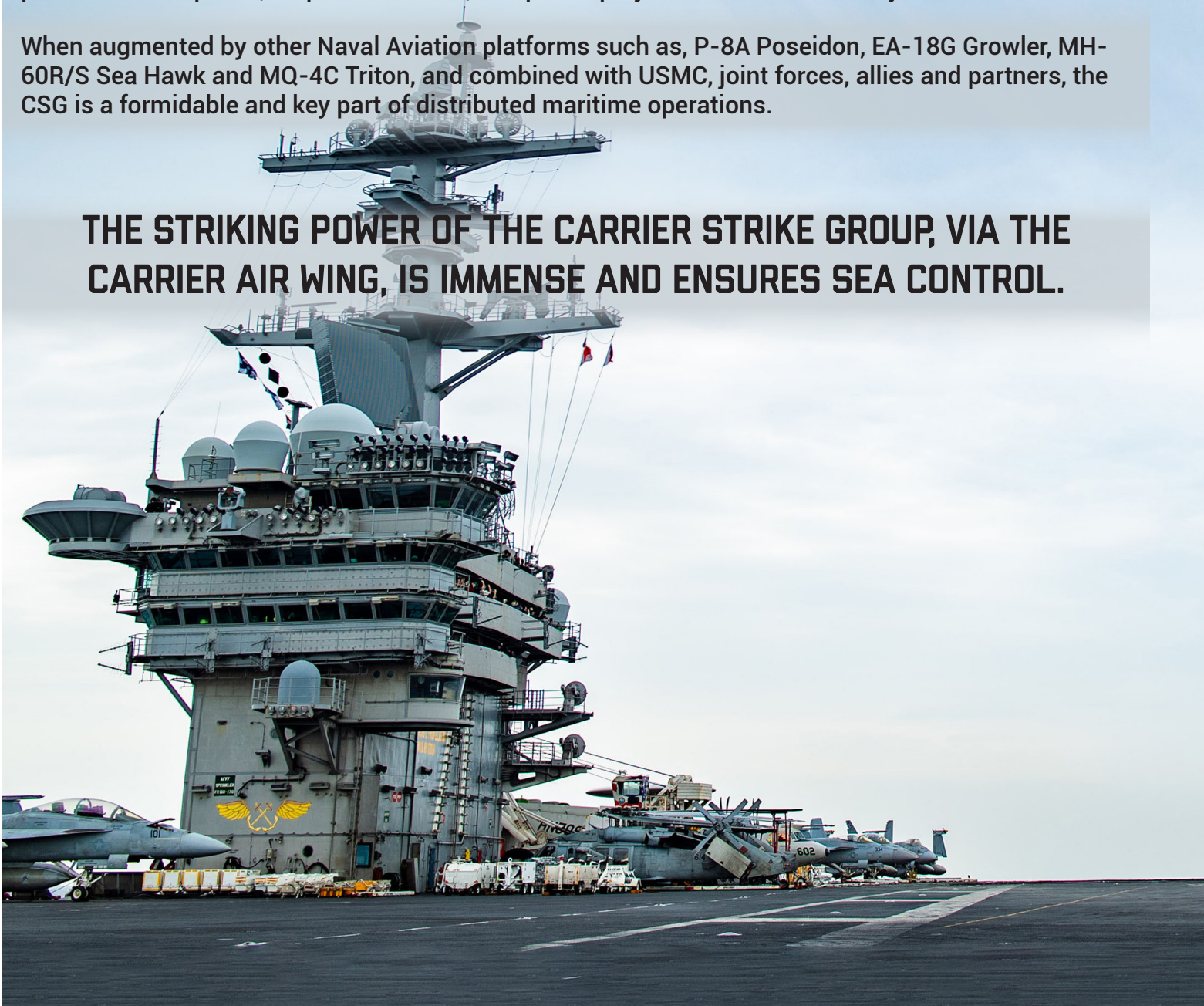
The combined capability of the nuclear-powered Nimitz and Ford-class aircraft carriers with their embarked Carrier Air Wings (CVW) is unmatched by any other nation's navy.

Naval Aviation characterizes the CSG as an agile, all-domain force that remains key to the Navy's integrated capability across the spectrum of operations.

The Navy, enabled by Naval Aviation, provides credible capability for deterrence, sea control, preservation of peace, response in crisis, and power projection to win decisively in combat.

When augmented by other Naval Aviation platforms such as, P-8A Poseidon, EA-18G Growler, MH-60R/S Sea Hawk and MQ-4C Triton, and combined with USMC, joint forces, allies and partners, the CSG is a formidable and key part of distributed maritime operations.

THE STRIKING POWER OF THE CARRIER STRIKE GROUP, VIA THE CARRIER AIR WING, IS IMMENSE AND ENSURES SEA CONTROL.



CARRIER AND AIR WING

Survivable: When combined with the joint force, the CSG's mobility and defensive capability provides survivable options to the joint commander.

Lethal: The CVW provides air superiority which enables sea control and enough firepower for subsurface, sea, and land strikes that make a difference.

Flexible: CVNs are survivable, agile and resilient airfields that do not require basing access or overflight rights in today's complex security environment

Deterrence: The CSG sends a powerful deterrence message to those who threaten U.S. interests, to compel them to say, "today is not the day."

C2 - Battle Management: Led by a 1-Star commander, the CSG operates under a unified command structure with seamless real-time communications enabling synchronized actions and the flexibility to adapt and respond in dynamic situations.

Value Proposition: CVNs and their CVWs come at a price, but the extension of sovereign U.S. territory around the globe on short notice is priceless.



DEPLOYED NAVAL FORCES

USS Dwight D. Eisenhower (CVN 69) and CVW-3 departed on its most recent deployment in **October 2023** and returned to Naval Station Norfolk in **July 2024** having executed sustained operations in the U.S. 5th Fleet area of operations. As the ship transitions to its maintenance phase, the focus is to ensure its long-term mission readiness and technical upgrades to maintain its edge as a deployed force and extend its service life.

USS Carl Vinson (CVN 70) and CVW-2 began deployment **Nov. 18, 2024**. VINCSG successfully integrated six additional F-35C aircraft into CVW-2 bolstering U.S. combat power and flexibility in the Indo-Pacific.

USS Theodore Roosevelt (CVN 71) and CVW-11 completed a nine-month deployment to U.S. 5th and 7th Fleet areas successfully integrating 5,000 Sailors in exercises Freedom Edge, Valiant Shield, Multi-Large Deck exercises with U.S. and Japanese forces, and bilateral exercises with India, Pakistan, and Republic of Korea. TRCSG traveled 71,426 nautical miles and conducted 21,278 flight hours and 9,462 sorties in support of maritime security operations. Roosevelt returned **Oct. 15, 2024**.

USS Abraham Lincoln (CVN 72) and CVW-9 completed a five-month deployment to the Indo-Pacific and Middle East to bolster U.S. military force posture, deter regional escalation, degrade Houthi capabilities, defend U.S. forces, and sail with allies and partners to promote security, stability, and prosperity. CVW-9 conducted the first employment of the next-generation jammer and combat employment of the F-35C platform by conducting strikes against Iranian-backed Houthi ammunition storage depots. ABECSSG conducted over 11,600 flight hours, 5,500 aircraft sorties, and over 4,400 arrested landings. Lincoln returned **Dec. 20, 2024**.

USS George Washington (CVN 73) is 7th Fleet's premiere forward-deployed aircraft carrier, a long-standing symbol of the United States' commitment to maintaining a free and open Indo-Pacific region and operates alongside Allies and partners across the U.S. Navy's largest numbered fleet. The Nimitz-class aircraft carrier George Washington and **CVW-5** returned to Commander, Fleet Activities Yokosuka, Japan as the United States' only forward-deployed aircraft carrier, **Nov. 22, 2024**.

This marks the second time George Washington has served as the Forward-Deployed Naval Forces-Japan (FDNF-J) aircraft carrier. In 2008, it became the first nuclear-powered aircraft carrier to be forward deployed to Japan before being relieved by USS Ronald Reagan (CVN 76) in 2015.

USS Harry S. Truman (CVN 75) and CVW-1 began deployment **Sept. 23, 2024**. HSTCSG has completed a Suez Canal transit, combat sorties in support of Operation Prosperity Guardian, and NATO exercises in the North Sea.

Deployments in 2024 and 2025 validate the enduring relevance of aircraft carriers in modern naval warfare from operating in contested environments to providing humanitarian aid and disaster response.

DEPLOYED NAVAL ALLIES

ITS Cavour (CVH 550) deployed in January 2024 to operate in the Indo-Pacific region where they achieved initial operating capability for their F-35B aircraft and participated in multinational and bilateral exercises. On Aug. 10, the ABECSG and Cavour Carrier Strike Group completed the first-ever bilateral Multi-Large Deck Event held in the Indo-Pacific by the U.S. Navy and Italian Navy.

FS Charles De Gaulle (R91) began its deployment to the Pacific Ocean in November 2024, marking the first time a French aircraft carrier has been deployed to the region since 1968. FS Charles De Gaulle and its strike group carried out operational missions in the Red Sea before deploying to the Indo-Pacific to strengthen maritime security and interoperability between partner navies. While deployed, FS Charles De Gaulle participated in the French-led, multilateral exercises, La Perouse and Pacific Steller.

HMS PRINCE OF WALES (R09) is scheduled to deploy to the Indo-Pacific, spring of 2025 and to participate in multilateral exercises such as Talisman Sabre which included more than 30,000 participants from 13 nations in 2023.



NIMITZ TO FORD CARRIERS, 50 YEARS OF WINNING

USS Nimitz (CVN 68), lead ship of the Nimitz-class aircraft carrier, has entered its 50th year of service in 2025, following an extension of its operational life to support the 12-carrier fleet requirement. When it deploys, Nimitz exemplifies the U.S. Navy's mission to promote prosperity and security, deter aggression, and protect the American way of life. For over 50 years, the Nimitz has been a beacon of peace and strength, preserving stability, responding in times of crisis, and ensuring we are ready to win decisively in war.

Nimitz played pivotal roles in a variety of operations demonstrating the Navy's global reach:

- Operation Evening Light (1980)
- Operation Earnest Will (1987-1988)
- Operation Desert Storm (1991)
- Operation Southern Watch (1992-2003)
- Operation Enduring Freedom (2001-2014)
- Operation Iraqi Freedom (2003-2011)
- Operation Inherent Resolve (2014-2021)

Service Life Accomplishments: Completed 30 deployments.

As Nimitz approaches the conclusion of its remarkable service, we are ushering in the Ford-class while maintaining and advancing our Nimitz-class aircraft carriers.

Nimitz-Class Aircraft Carriers:

USS Dwight D. Eisenhower (CVN 69)

USS John C. Stennis (CVN 74)

USS Carl Vinson (CVN 70)

USS Harry S. Truman (CVN 75)

USS Theodore Roosevelt (CVN 71)

USS Ronald Reagan (CVN 76)

USS Abraham Lincoln (CVN 72)

USS George H.W. Bush (CVN 77)

USS George Washington (CVN 73)



FORD-CLASS

- USS Gerald R. Ford (CVN 78) is the first commissioned of five currently planned ships in the Navy's newest Gerald R. Ford class of nuclear-powered aircraft carriers. During Ford's historic first deployment, Ford responded to the onset of the Israel-Hamas conflict, bolstering the U.S. deterrence posture in the region and demonstrating U.S. commitment to regional security.

- Ford-class design builds from the Nimitz hull and incorporates advanced technological improvements to generate more aircraft sorties per day, more electrical power to support ship systems, features allowing reduced manning requirements, and a reduction in the 50-year lifecycle operating and support costs compared to the Nimitz-class.

- PCU John F. Kennedy (CVN 79) is next to be delivered to the Fleet. Future aircraft carriers Enterprise (CVN 80), Doris Miller (CVN 81), William J. Clinton (CVN 82), and George W. Bush (CVN 83) will follow.

- Notable advancements include the electromagnetic aircraft launching systems (EMALS) replacing the traditional C13 steam catapult, advanced arresting gear (AAG) replacing the current Mark 7 arresting engines, all-electric utilities eliminating steam service lines and reducing maintenance and corrosion, an improved flight deck layout that is larger and enables greater sortie generation, and other modernizations resulting in reducing manning and greater service life allowance (SLA).

- The Ford-class is designed with the future fight and long-term advantage in mind, accommodating future innovation and technology to include direct energy weapons.

- The EMALS and AAG systems expand the operational capability of Ford-class carriers, providing the capability for launching and recovering all current and future CVW platforms – from lightweight unmanned aerial systems (UASs) to heavy strike fighters.



CARRIER AND AIR WING 2025- 2040

Enhancing Combat Power and Performance

Advancing Technological Superiority

- The CVW of 2040 will harness rapid advancements in technology, including unmanned aerial systems (UASs) with advanced autonomous warfighting capability and capacity to complement manned platforms, enhancing operational flexibility and real-time decision-making.

Enhancing Combat Power and Efficiency

- Innovative solutions will increase fuel efficiency and extend the operational range of the carrier air wing.
- A combination of F-35C Lighting II and F/A-XX will provide the Navy tactical fighter aircraft capacity and capability within the CVW. These platforms will provide advanced, carrier-based power projection capabilities that extend the striking range of the world's most agile and survivable airfields, ensuring the Navy maintains dominance in high-end conflicts.
- The Navy's Collaborative Combat Aircraft (CCA) effort and integration into next-generation platforms concept of operation enhances the capability of CVWs in air superiority, anti-surface warfare (ASUW), and strike missions.

Transforming Carrier Operations

- Carriers themselves will evolve with automated flight deck systems, digital management tools for aircraft movement, and potential stealth enhancements for greater operational flexibility and survivability.
- These advancements will streamline operations and increase the speed and efficiency of flight deck operations.

Driving Joint and Multi-Domain Integration

- The CVW will seamlessly integrate into joint and cross-domain operations, leveraging real-time collaboration with space-based assets, cyber forces, and allied networks.
- Enhanced interoperability with allied nations will ensure cohesion in coalition operations, strengthening collective defense capabilities.

Empowering Decision Superiority

- Quantum computing and secure quantum-enhanced communication networks will provide real-time decision-making tools, ensuring information dominance and protecting sensitive mission data in contested environments.

Ensuring Operational Adaptability

- The CVW of 2040 will embody operational flexibility, leveraging cutting-edge technology to dominate in multi-domain warfare and adapt to the rapidly changing nature of global conflict.

WEAPONS

Naval Aviation is driving weapons innovation to ensure a combat-credible force, integrating next-generation precision strike, long-range engagement, and network-enabled weapons systems that enhance lethality, survivability, and air superiority in contested environments.



Long Range Anti-Ship Missile (LRASM) AGM-158B

- The LRASM is a precision-guided, long-range anti-ship cruise missile developed for sophisticated offensive anti-surface warfare capability.
- It features advanced sensors and semi-autonomous guidance systems, allowing it to operate effectively with reduced reliance on Intelligence, Surveillance and Reconnaissance (ISR), network links, and GPS navigation.
- This missile is integrated on to F/A-18E/F Super Hornets.

GUNSLINGER AIM-174B

- The AIM-174B is a long-range, air-to-air missile also known as the SM-6.
- This missile allows F/A-18E/F Super Hornets to engage adversary aircraft at extended distances.
- It represents the first dedicated long-range, air-to-air missile employed by the U.S. Navy since the retirement of the AIM-54 Phoenix in 2004, marking a significant advancement in Naval Aviation combat capabilities.

TODAY'S CARRIER



- The CVW is in high demand by all component commanders due to its deterrent presence, inherent maneuverability, and volume of fires.
- The CVW leverages advanced technologies, networked operations, joint interoperability, and a talented workforce to maintain the Navy's long-term advantage.
- The F/A-18E/F Super Hornet is the CVW's primary multi-role strike fighter delivering unmatched flexibility and firepower in air-to-air and air-to-ground missions. Equipped with advanced avionics, precision-guided munitions, and electronic warfare capabilities, the Super Hornet excels in contested environments. The platform's continuous modernization ensures it remains lethal and interoperable within the joint force.
- The F-35C Lightning II is a force multiplier, enhancing joint interoperability. Its ability to gather, process, and disseminate real-time battlefield information elevates the CVW's lethality and survivability, ensuring dominance in the high-end fight.
- Today's CVW's maneuverability, survivability, and effectiveness has been proven through two years of sustained operations in highly contested environments.

AIR WING



- The EA-18G Growler specializes in electronic attack and suppression of enemy air defenses. Equipped with advanced jamming pods, sensor suites, and high-speed anti-radiation missiles, this platform provides critical electromagnetic spectrum superiority enabling seamless coordination, enhancing joint warfighting capabilities, and ensuring an asymmetrical advantage.
- The E-2D Advanced Hawkeye is the Navy's premier airborne early warning and command and control aircraft. Its state-of-the-art radar systems and battle management capabilities allow it to detect, track, and prioritize air and surface threats, ensuring an unparalleled situational awareness edge.
- The MH-60 Romeo and Sierra Sea Hawk helicopters provide the CVW with unparalleled versatility and anti-surface warfare (ASUW) protection. The MH-60R focuses on anti-submarine warfare (ASW), leveraging advanced sensors and weapons systems to counter undersea threats. The MH-60S complements this with robust (combat) search and rescue (SAR), combat logistics, and contingency operational support. Both platforms carry a suite of ship defense and counter-UAS weapon systems, forming a foundation of surface fleet defense. Together, they are a force multiplier for both the CVW and the independent deployers of the surface fleet - truly encapsulating the flexibility and adaptability of Naval Aviation.
- The CMV-22B Osprey revolutionizes carrier logistics by providing high-speed, long-range, and flexible transport for personnel, equipment, and supplies. This platform exemplifies Naval Aviation's innovation, enhancing readiness for the future fight and the joint warfighting ecosystem.
- The comprehensive review and associated improvements will ensure this critical platform's success through 2040.

4TH/5TH GENERATION PLATFORMS

The Navy's 4TH and 5TH generation strike fighter programs are critical to advancing air combat capabilities with a focus on enhanced stealth, sensor integration, and superior strike power. These programs ensure the CVW remains ready to meet today's threats and evolving challenges across the full range of maritime operations.

4TH Generation Fighters:

- The F/A-18E/F Super Hornet, introduced in the late 1990s, continues to be a cornerstone of the CVW due to its exceptional versatility. Capable of air superiority, fighter escort, reconnaissance, and close air support missions, the Super Hornet demonstrates its ability to adapt to complex operational demands.
- The platform's ongoing modernization has culminated in the Block III upgrade, which equips advanced networked capabilities, improved survivability and an advanced cockpit system. These enhancements are designed to maintain dominance in contested environments, ensuring the Navy can operate effectively across a wide range of missions while seamlessly integrating into the joint force.

5TH Generation Fighters:

- The F-35C Lightning II delivers unmatched capabilities for carrier-based operations. Its advanced stealth design, sensor fusion, and enhanced connectivity enable it to collect, analyze, and share tactical data seamlessly across multiple platforms, ensuring superior situational awareness and operational integration.
- Purpose-built for carrier operations, this platform excels in high-threat environments, leveraging its low observable signature and cutting-edge avionics to dominate in contested airspace. Its ability to operate effectively within joint and coalition frameworks strengthens the Navy's role as a critical enabler of integrated maritime and joint combat power.
- 5th generation fighters represent the next generation of Naval Aviation, enhancing the Navy's capacity to address today's threats and adapt to evolving threats, ensuring air superiority in complex and dynamic operational environments.



AIRBORNE ELECTRONIC ATTACK



- The Navy provides the Department of Defense (DoD) with the only dedicated, broad spectrum Airborne Electronic Attack (AEA) platform, the EA-18G Growler, delivering unmatched capability to dominate the electromagnetic spectrum. Deployed from both CSGs and expeditionary airfields, the EA-18G Growler denies adversaries control of the electromagnetic spectrum, ensuring the survivability of 4th and 5th generation fighters, CVNs, and the CSG while enabling kinetic effects by securing access to contested battlespaces.

- Since 2012, CVW (or CSG) and expeditionary EA-18G Growlers have provided persistent AEA presence in critical theaters. This inherent flexibility remains vital as distributed operations become a defining characteristic of modern joint warfare. The platform's sustained presence and adaptability underscore its critical role in ensuring freedom of action across a range of operational environments.

- With over 15 years of combat employment, the EA-18G Growler fleet is undergoing significant modernization to field the Growler Block II (GB2). This enhanced variant incorporates cutting-edge sensors, mission computers, crew-vehicle interfaces, and advanced networking capabilities. GB2 represents a critical node in modern joint warfare, ensuring the Navy stays ahead of adversaries in electromagnetic operations for decades.

- A cornerstone of this modernization is the introduction of the Next Generation Jammer Mid-Band (NGJ-MB), which achieved Initial Operational Capability (IOC). NGJ-MB delivers transformative improvements over legacy systems, including increased power, target flexibility, and advanced jamming techniques. The system utilizes state-of-the-art digital and electronically scanned array technologies to disrupt, deny, and degrade enemy air defense and communication systems.

- During its deployment with Electronic Attack Squadron (VAQ) 133 aboard USS Abraham Lincoln (CVN 72), NGJ-MB demonstrated high-end capabilities, showcasing its ability to enhance operational effectiveness in contested environments. By combining NGJ-MB with the EA-18G's legacy capabilities and GB2 upgrades, the Growler ensures the fleet remains a decisive force in modern joint and coalition operations.

- This evolution reflects the Navy's commitment to maintaining spectrum dominance, addressing current and future threats, and supporting combatant commanders with capabilities that enable mission success in the most complex operational landscapes. The collaboration between the Navy, industry partners, and allied forces ensures that the EA-18G Growler will continue to lead in the electromagnetic warfare domain, enabling the fleet to fight and win in the modern battlespace.

CARRIER ONBOARD DELIVERY MISSION



Revolutionizing Carrier Logistics

- The CMV-22B Osprey transforms logistics operations by providing high-speed, long-range, and versatile transport for personnel, equipment, and supplies to and from CSGs.
- Its unique ability to deliver critical components, such as the F-35C's power module, directly to deployed carriers ensures mission readiness.

Enhancing Operational Agility

- With vertical takeoff and landing (VTOL) capabilities, the CMV-22B Osprey enables access to austere and dispersed locations, aligning with the Navy's DMO strategy.
- Its ability to adapt to dynamic logistical demands strengthens the fleet's operational flexibility and ensures sustained support for deployed forces.

Extending Reach and Efficiency

- The CMV-22B Osprey's extended range and fuel efficiency allow it to cover vast distances, connecting CSGs to shore-based logistics hubs without requiring intermediate refueling or stops.
- This capability significantly reduces response times, enhancing the Navy's ability to project power and maintain operational momentum in contested environments.

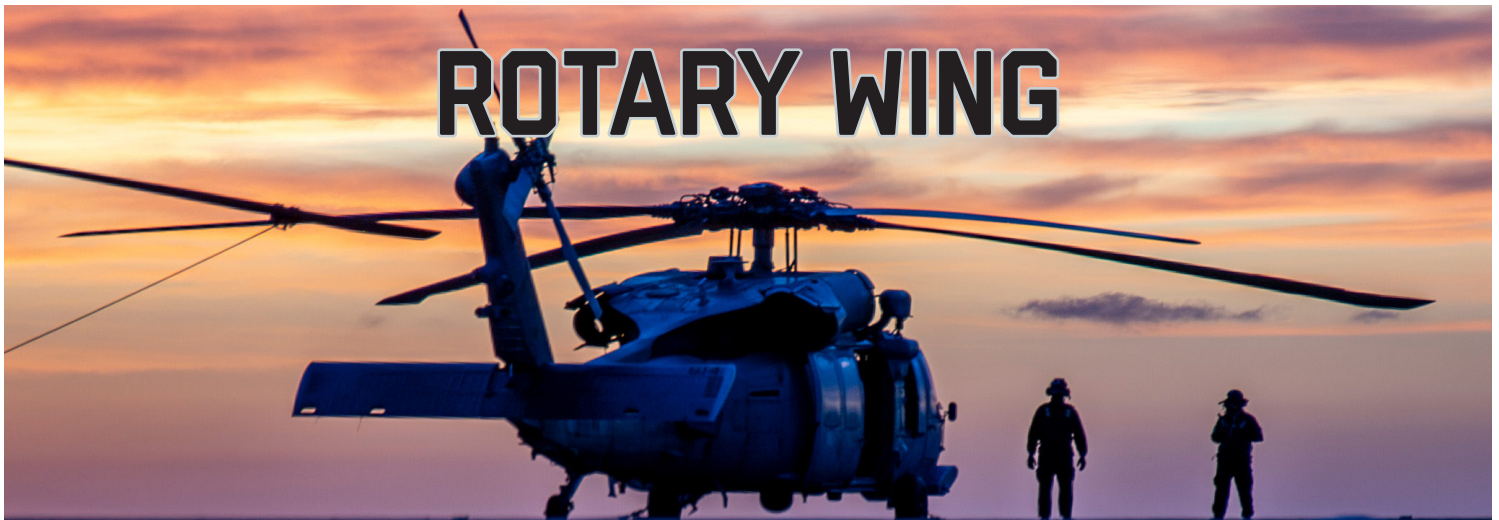
Prioritizing Technological Innovation

- The CMV-22B Osprey incorporates cutting-edge avionics and communication systems, enabling it to operate effectively in contested environments and maintain connectivity with other naval platforms.
- Its advanced design reflects the Navy's commitment to leveraging technology to ensure sustained superiority in dynamic operational landscapes.

Strengthening Quality of Life for Sailors

- The CMV-22B Osprey's ability to transport personnel quickly and efficiently to and from deployed units enhances quality of life by reducing transit times and ensuring reliable support for Sailors in the field.
- Its role in delivering supplies, including medical and morale-boosting resources, directly contributes to the welfare and effectiveness of deployed personnel.

ROTARY WING



- Navy rotary wing assets are critical to sustaining, defending, and increasing the combat radius of Fleet operations. Rotary wing assets belong to two communities; Helicopter Sea Combat (HSC) that operates the MH-60S Sea Hawk and the MH-53E Sea Dragon, and Helicopter Maritime Strike (HSM) that operates the MH-60R Sea Hawk. These communities have squadrons assigned to CVWs as well as expeditionary squadrons that provide detachments in support of Fleet requirements.

- HSC expeditionary units: MH-60S Sea Hawk squadrons integrate combat ready detachments to the Amphibious Ready Group/Expeditionary Strike Group, providing capability across the range of military operations to include ASuW, special operations assault support, combat logistics, personnel recovery, and Humanitarian Response/Disaster Relief.

- As a contingency, all MH-60S Sea Hawk squadrons train to operate in a distributed maritime environment, increasing the size and capacity of our personnel recovery and combat logistics network.

- The HSM rotary wing is undergoing testing in upgraded capabilities in signals intelligence, battlespace information management, magnetic anomaly detection and austere basing operations.

- MH-60R Sea Hawk is a high-demand platform and force multiplier as the Navy's primary anti-submarine and anti-surface warfare helicopter.

- The MH-53E Sea Dragon provides permanently forward-deployed Mine Countermeasure Mission (MCM) detachments to the 5th and 7th Fleet AORs, though it anticipates its end of operational service in 2027. In response, the Navy is enhancing the capabilities of the MH-60S Sea Hawk for MCM on Littoral Combat Ships (LCS). When embarked on the LCS, MH-60S Sea Hawk detachments operate with a family of onboard systems in concert with unmanned surface and underwater vehicles to provide a comprehensive approach central to the Navy's modernized MCM strategy.

- Naval Aviation provides critical Search and Rescue (SAR) support to fleet concentration areas as a vital component of the U.S. Navy's aviation capabilities, providing life-saving services and support to military and civilian communities throughout the U.S. SAR squadrons stationed at Lemoore, Whidbey Island, Patuxent River, and Key West are known for unparalleled professionalism and rapid response as they routinely demonstrate successful execution of challenging rescue operations, medical evacuations, and support to joint operations.

- The Future Vertical Lift (FVL) program is a Department of Defense (DoD) initiative aimed at developing a new generation of vertical lift aircraft to replace the current fleet of aging helicopters across the U.S. military services. The Navy's FVL Maritime Strike (MS) program seeks to develop a family of manned and unmanned vertical lift aircraft tailored for maritime operations, intended to replace the MH-60R and MH-

MARITIME PATROL AND RECONNAISSANCE

- The P-8A Poseidon is the Navy's premier multi-mission aircraft and cornerstone of the Maritime Patrol and Reconnaissance Force (MPRF).
- This platform provides advanced capabilities for anti-submarine warfare (ASW), anti-surface warfare (ASuW), and ISR.
- Increment 3, Block 2 (I3B2) upgrades bring enhanced sensors, digital interoperability, and expanded weapons capacity, ensuring relevance and dominance in contested environments through the 2030s.
- Increment 3 upgrades include an improved broad area of ASW, such as ASW focused signals intelligence capability, additional ASuW weapon capability, improved communications networking, and updated crew interfaces.
- The modernization of the MPRF aligns with the Navy's strategic vision, integrating cutting-edge technology, and multi-mission versatility to meet evolving threats.
- Together, the P-8A Poseidon, MQ-4C Triton, and emerging CCA initiatives ensure the Navy remains ready to prevail in high-end conflict and maintain a decisive edge in maritime operations.



MQ-4C TRITON

- Operated by Unmanned Patrol Squadron (VUP) 19, their mission is to employ the MQ-4C Triton to provide persistent, world-wide ISR, distributing valuable and time-critical intelligence to combatant and fleet commanders.
- The MQ-4C Triton provides persistent ISR over vast maritime areas, enabling enhanced domain awareness and decision superiority.
- Equipped with advanced radar, electro-optical/infrared sensors, and SIGINT payloads, the MQ-4C Triton offers a comprehensive picture of surface activity.
- Continued upgrades, including advanced Multi-Intelligence (Multi-INT) capabilities, enable this platform to support a broader range of missions, from strategic ISR to maritime patrol and target acquisition.



AIRBORNE COMMAND AND CONTROL

- The E-2D Advanced Hawkeye serves as a critical airborne command and control node, enabling seamless integration of air and surface assets within the CSG and across joint forces.
- Its evolving software and networked capabilities align with the Navy's focus on enhancing interoperability and data-sharing to support Joint All-Domain Command-and-Control (JADC2), ensuring the Navy's role in a fully integrated joint force.
- This platform's advanced sensor systems and ability to coordinate kill webs empower distributed forces, ensuring survivability and lethality across widely dispersed units in contested environments.



- Its aerial refueling capability significantly extends its operational reach, enhancing the flexibility and persistence required for distributed operations.
- By providing real-time situational awareness, long-range threat detection, and battle management, the E-2D Advanced Hawkeye enables commanders to make informed and timely decisions, which is vital for outpacing adversaries in high-end combat.
- The Delta System Software Configuration (DSSC) upgrades and mission system enhancements ensure the platform remains at the forefront of electromagnetic spectrum dominance, a core component of maintaining decision superiority.
- The E-2D Advanced Hawkeye remains an indispensable asset, providing unparalleled situational awareness, battle management, and kill web execution, ensuring the Navy's ability to dominate the battlespace and prevail in the most demanding missions.
- Airborne Command & Control and Logistics Wing will integrate the MQ-25 Stingray into the CVW alongside the E-2D Advanced Hawkeye.

MQ-25 WILL FLY IN 2025

- The MQ-25 Stingray is the first carrier-based unmanned aircraft, designed to extend the range and endurance of CVWs by providing aerial refueling for F/A-18E/F Super Hornets, F-35C Lighting IIs, and other carrier-based platforms.
- Fleet introduction with first flight and initial sea trials is anticipated in the near future, marking a significant step toward incorporating unmanned systems into the CVW.



- With a projected ability to deliver over 15,000 pounds of fuel, this platform significantly enhances the Navy's operational reach, enabling sustained operations in contested environments.
- The MQ-25 Stingray's modular design allows for the potential integration of additional payloads, such as electronic warfare and enhanced ISR capabilities, ensuring it remains adaptable to future mission requirements.

TAKE CHARGE AND MOVE OUT

- The E-6B Mercury is a critical component of the Navy's strategic command and control architecture, serving as both a communications relay and an airborne command post.
- Its execution of the Take Charge and Move Out (TACAMO) mission ensures unbroken connectivity between the President, Secretary of Defense, and U.S. Strategic Command with the nation's nuclear forces during times of crisis, reinforcing strategic deterrence.
- Looking Glass capabilities further augment the platform's role, enabling senior leaders to command and control U.S. intercontinental ballistic missile (ICBM) forces, including the ability to launch ICBMs via the airborne launch control system.



- On October 1, 2024, the Navy executed an official administrative control (ADCON) shift for Strategic Communications Wing (SCW) 1, moving the direct oversight from Naval Air Forces to Naval Air Force Atlantic and from U.S. Pacific Fleet to U.S. Fleet Forces.

- This transition demonstrates the Navy's commitment to aligning its most critical communication missions under a centralized and streamlined operational structure, enhancing efficiency and effectiveness.

- The E-6B Mercury is undergoing continuous modernization to ensure its systems remain resilient against emerging threats, including advancements in electronic warfare and cybersecurity.

- The E-6B Mercury's successor, the E-130J, will be delivered under the TACAMO Recapitalization Program to take over the TACAMO mission with expanded range, endurance and survivability.



NAVAL AVIATION

America is a maritime nation. The seas are the lifeblood of our economy, our national security, and our way of life. The U.S. Navy harnesses our ships, submarines, aircraft, unmanned platforms and highly trained Sailors to support and protect the American way of life.

MISSION

Man, train, and equip deployable combat-ready Naval Aviation forces that win in combat.



NAVAL AVIATION AROUND THE GLOBE



SEA CONTROL

AIR SUPERIORITY

OUR PEOPLE

100,000+ SAILORS

Pilots: Pilot: 6,789
Student: 2,297



NFOs: NFO: 2,526
Student: 552



UAVs: Pilot: 8
Student: 16



Aviation Boatswain's Mate
(Launching & Recovery)
(Fuels)
(Aircraft Handling)



Air Traffic Controller



Aviation Machinist's Mate



Aviation Electrician's Mate



Aerographer's Mate



Aviation Structural Mechanic
(Safety Equipment)
(Hydraulics and Structures)



Aviation Ordnanceman



Aviation Support
Equipment Technician



Aviation Electronics
Technician



Naval Air Crewman
(Operator)
(Mechanical)
(Avionics)
(Helicopter)
(Tactical Helicopter)



Aviation Maintenance
Administrationman



Aircrew Survival
Equipmentman



"If warfighting is our imperative, then warfighters must be central to our mindset and mission."

VISION

- ✦ Delivering **capability and capacity to win** in the Great Power Competition
- ✦ Generating **future readiness** across the force
- ✦ Achieving **revolutionary training**—to form the framework of Naval Aviation's future

The CSG is a versatile, agile and resilient weapon system centered on the nuclear-powered aircraft carrier.

The CVN has the speed, agility, survivability and maneuverability to relocate the lethal air wing over 5,000 miles in less than seven days and arrive on station ready to fight.

CHIEF OF NAVAL AIR TRAINING (CNATRA)

Training Combat Ready Aviation Professionals

Approximately 1,100 pilots and Naval Flight Officers earn their "Wings of Gold" each year.

T6-B Texan II



T-45C Goshawk



TH-73A Thrasher



TH-57 Sea Ranger



T-44C Pegasus

CNATRA conducts six Student Naval Aviator training pipelines - **Strike, Rotary, Maritime, Tilt-rotor, E-2/C-2, and E-6**. The foundation of a Naval Aviator's development begins in the Primary phase of training. Primary training is conducted in the **T-6B** at VT-27 or VT-28 at Training Air Wing FOUR and VT-2, VT-3, or VT-6 at Training Air Wing FIVE.

E-2C/D Hawkeye



F-16C Fighting Falcon



EA-18G Growler



F/A-18E/F Super Hornet



F-35C Lightning II



E-6B Mercury



KC-130T Hercules



P-8A Poseidon



MH-60R/S Sea Hawk



CMV-22B Osprey



MH-53E Sea Dragon



C-2A Greyhound



C-40A Clipper



MQ-4C Triton



MQ-25 Stingray



2,806
AIRCRAFT

11
AIRCRAFT
CARRIERS

146
SQUADRONS



HIGH END TRAINING

A close-up, side-profile view of a pilot's head in a cockpit. The pilot is looking forward at a large, curved display screen. The screen shows a virtual training environment featuring a coastal city with a prominent bridge, a harbor with several ships, and a large aircraft carrier in the foreground. The cockpit interior is visible, including various control panels, buttons, and a joystick. The lighting is dim, with the primary light source being the screen and some green ambient lights on the cockpit panels.

- We are investing in and modernizing warfighting competency, because we fight how we train.
- By 2027, we will have reliable, realistic, relevant, and recordable live virtual constructive (LVC) environments to train Naval Aviation warfighters and successfully execute high-end warfighting in joint and fully-informed training environments. LVC training environments combine live exercises with virtual simulations and constructive computer-generated forces, creating comprehensive and realistic training scenarios. This approach allows for complex, multi-domain operations training without the need for extensive live resources.
- The Naval Air Warfare Center Aircraft Division's (NAWCAD) Joint Simulation Environment (JSE) program leverages investments in modernization to support the F-35, E-2D, F/A-18, and EA-18 programs, including the deployment of the second training system aboard an operational aircraft carrier.
- Simulators aboard aircraft carriers provide Naval Aviators more opportunities to train in realistic and simulated environments while deployed, enhancing warfighting capabilities.
- Naval Aviation trains and operates within operational and security environments at the Special Access Program (SAP) and SAP All-the-Time (SATT) levels, which maximizes CVW capability, lethality, and survivability by using the full suite of combat capabilities.

NAVAL AVIATION WARFIGHTING DEVELOPMENT CENTER (NAWDC)

- NAWDC is leading advanced revolutionary training at the U.S. Navy Fighter Weapons School (TOPGUN), Carrier Airborne Early Warning Weapons School (CAEWWS), Airborne Electronic Attack Weapons School (HAVOC), Rotary Wing Weapons School (SEAWOLF) and Maritime, Intelligence, Surveillance and Reconnaissance Weapons School (MISR) through integrated training ahead of deployment for Carrier Air Wings (CVW).
- The MISR Weapons School is seeing a significant demand for MISR Weapons and Tactics Instructors (WTIs) throughput. MISR bridges the gap between the operational and intelligence warfighting disciplines to execute missions that include the find-fix-track-target (F2T2) portions of the high-end fight.
- NAS Fallon is home to the Navy's premier training range, providing a state-of-the-art environment for LVC training. This capability ensures that CVWs are fully prepared for DMO and joint force integration.
- Warfare Commander's conference (WARCOM) at NAWDC is a critical event for warfighters to present, discuss, and refine the latest innovations and tactical strategies in naval operations.
- Weapons and Tactics Instructors (WTIs) at NAWDC provide 24/7 training, feedback, and problem-solving support to deployed units fostering a culture of constant learning and implementation. By embedding cutting-edge tactics, techniques, and procedures (TTPs) into real-world operations, WTIs enable deployed forces to adapt, innovate, and sustain warfighting superiority in dynamic and contested environments.



FUTURE STRIKE FIGHTER

Modernization

- CVW modernization is essential to maintaining the Navy's competitive edge against near-peer adversaries, ensuring deterrence, and achieving readiness for decisive combat power.
- The Navy is advancing the F/A-XX program, and this sixth-generation fighter is intended to replace the F/A-18E/F Super Hornet and EA-18G Growler, bringing enhanced capabilities to the CVW.
- The Navy remains committed to the F/A-XX program, recognizing its importance in future force structure and design. Efforts are underway to balance near-term investments with the development of this next-generation platform.
- The F/A-XX is expected to feature superior range, speed, and sensor capabilities, with an emphasis on integrating manned and unmanned systems. This includes collaboration with autonomous drones serving as force multipliers and electronic warfare assets.

Advanced Technology Integration

- The Navy is adopting a phased approach to integrating advanced technologies into existing platforms. This strategy ensures that current readiness is maintained while progressively enhancing capabilities to meet future operational requirements.
- Ongoing research and development efforts are focused on incorporating directed energy systems and hypersonic weapons into the Naval Aviation arsenal.

Artificial Intelligence and Quantum Technologies

- The Navy is actively incorporating AI to enhance autonomy in aviation platforms. A notable collaboration with Shield AI involves integrating AI software into the BQM-177A sub-sonic aerial target, advancing autonomous systems for real-world Naval Aviation applications.
- AI is transforming naval operations by improving decision-making processes. AI-enabled computing streamlines the organization of incoming metrics and sensor data, facilitating real-time management of complex electrical architectures.
- AI-driven simulations provide realistic training environments for Naval Aviators, improving readiness and operational effectiveness. These advanced training tools enable personnel to engage in complex scenarios, enhancing their decision-making and tactical skills.
- The Naval Research Laboratory (NRL) and Naval Information Warfare Center (NIWC) Pacific have established the Naval Quantum Computing Program Office. This initiative facilitates collaboration among quantum experts across naval warfare centers to explore applications of quantum computing in operations research, quantum machine learning, and cryptography.
- Quantum sensing technologies offer the potential for highly accurate navigation systems, crucial for Naval Aviation operations in GPS-denied environments. Research in quantum magnetometers and related technologies aims to enhance positional accuracy and resilience against signal interference.



MAINTENANCE OPERATIONS CENTER

Core Principles:

- Proactive: Leverage, measure, and track data to anticipate combat readiness issues and degraders.
- Flexible: Be responsive to operational and maintenance needs and demands.
- Transparent: Clarify and share priorities across the enterprise.
- The establishment of the Maintenance Operations Center (MOC) represents a critical step toward achieving the Navy's readiness goals, ensuring that Naval Aviation maintains a combat-credible force capable of responding to any contingency.
- Meeting the Full Mission Capable Aircraft Required (FMCAR) and Mission Capable Aircraft Required (MCAR) goals by FY27 is not just a maintenance target but a readiness imperative, ensuring that Naval Aviation remains fully mission-capable across the globe.
- The Naval Sustainment System – Aviation (NSS-A) improves warfighting readiness by leveraging commercial best practices for maintenance, engineering and supply management to improve mission-capable (MC) rates for all aircrafts.
- Within the NSS-A, the MOC pillar is empowered to set priorities and direct scarce resources to ensure readiness across the flight-lines, while simultaneously elevating barriers to the appropriate Pillar Leads, and Flag/General Officer levels for resolution via the NSS-A HUD process.
- Performance to Plan (P2P), a methodology that identifies gaps, barriers, high impact actions, and measurable improvements, directly improved the availability of F/A-18 aircraft from fewer than 50% MC up to 80% in less than two years.
- These advancements are not just about platforms but also about people. Building and maintaining a culture of excellence in maintenance requires skilled maintainers, innovative leaders, and a focus on professional development.

•U.S. Pacific Fleet Order #2: Pacific Fleet's first line of effort is to Build and Maintain Combat Ready Forces with the lethality and capability to take the fight to the enemy and WIN. Combat readiness ensures military forces are able to fight and successfully meet the demand of assigned missions. Pacific Fleet's combat readiness is a cornerstone of our national security and critical to deterring our adversaries. It is founded in the professionalism of our Navy, the basis upon which our operational success depends, and represents the resolve - of each and every one of us - to defend a free and open Indo-Pacific and our way of life.

CHIEF OF NAVAL

Mission: Train, mentor, and deliver the highest quality Naval Aviators that win in competition, crisis, and conflict.

CNATRA encompasses five training air wings that utilize effective, tailored syllabi, supported by leading edge training systems, to ultimately provide numbered fleets and Marine expeditionary forces with aviators ready to fly, train, and win. In 2024, 752 aircraft logged 265,380 flight hours. CNATRA flew 25.5% of the combined Navy and Marine Corps flight hours with 21.5% of the aircraft, winging 1,167 Naval Aviators and seven Air Vehicle Pilots.

War Fighting North Star: Achieve 100% First Tour Fleet Seats in ALL type, model, series (TMS)

Since 2023, CNATRA has produced over 100% of required Navy, Marine Corps, and Coast Guard wingers to Fleet Replacement Squadrons. This continues to be accomplished through innovative operational, manpower, and maintenance initiatives. While executing transitions between the T-44C Pegasus to the T-54A Marlin and the TH-57 Sea Ranger to the TH-73A Thrasher, CNATRA continues to exceed War Fighting North Star requirements.

FY23: 101%, FY24: 107%, FY25: projecting 103%

From college graduation to reporting to a fleet squadron, production is planned for 105% leading to decreasing preload wait times, with 2024 waits decreasing over 50% in the last two years. This intentional overproduction will lead to a right sized preload and improved first seat fleet manning in all deployable air wings.

Time to Train Targets: 3 years Rotary/Multi-Engine pilot/All Naval Flight Officers and 3.5 years Strike/E-2 pilot

Contract Operated Pilot Training – Rotary (COPT-R)

- This trial program streamlines the process of transforming newly commissioned officers into helicopter pilots by providing focused and comprehensive civilian helicopter instruction in lieu of fixed-wing primary training in the T-6B Texan II. Graduation results to date show a more highly trained helicopter pilot in 2/3 of the time. Additionally, it reallocates T-6B Texan II flight hours to other student Naval Aviators to maintain primary flight training production requirements.

AIR TRAINING 2040

Advanced Helicopter Training System (AHTS)

- TH-73A Thrasher AHTS improves pilot training by applying a skills-based approach with just-in-time methodology and modern technology to ensure rotary-wing aviators are produced at a higher quality and more efficiently. Increased readiness for this training platform has facilitated the transition from the venerable TH-57 Sea Ranger, a nearly 60-year-old aircraft.

Mixed Reality (MR) and Virtual Reality (VR) Trainers

- Mixed Reality (MR) and Virtual Reality (VR) trainers are increasingly being integrated into the naval air training pipeline to support training requirements. In 2024, the T-45C Goshawk MR trainer, known as Project Link, was introduced to Training Wings ONE and TWO. MR and VR trainers enable more flexible training environments from primary through advanced syllabi, allowing for realistic simulations of tactics, emergency procedures, and complex flight maneuvers. In primary, the training devices are paired to artificial intelligence software allowing students to train on their own time but be graded and taught by software with a similar level of fidelity as a human instructor. This innovative approach helps ensure that student Naval Aviators receive high-quality instruction while streamlining the training process and improving overall readiness.

Undergraduate Jet Training System (UJTS)

- The UJTS program aims to replace the aging T-45C Goshawk with a new jet trainer that features advanced avionics and simulation capabilities, providing a more realistic, effective, and efficient training environment for the next generation of jet pilots.

Blue Angels:

- The Blue Angels are the iconic aerobatic team that highlights the capabilities of Naval Aviation. Through their precise flying and dynamic aerial routines, they not only entertain, but also offer a glimpse into the advanced technology of naval aircraft. More than just a show, the Blue Angels help inspire interest in the Navy, from aviation to engineering. By demonstrating the skill and teamwork involved in Naval Aviation, they encourage younger generations to consider a future in service, while promoting pride in the Navy's technological progress. Their airshows are an effective way to connect with future generations and showcase the opportunities available within the Navy.

OPERATING SAFELY

Safe Operations are Effective Operations

- The North Star for Safety across the Naval Aviation Enterprise (NAE) is a 50% reduction in mishaps, year over year. This will be achieved through the Get Real, Get Better process and aligning our approach within the science (safe as designed/built) and art (safe as maintained/operated) aspects of Naval Aviation operations.
- We are driving to reduce or eliminate unnecessary risk and accept risk only at the appropriate level. Every Sailor, from the flight deck to the cockpit, has a role in fostering a culture where proactive approaches to safety including communicating and mitigating risk are embedded within squadron operations.
- When incidents occur or there are “near-misses,” we transparently report them utilizing the sound Naval Aviation principles of integrity, formality, procedural compliance, level of knowledge, questioning attitude, and forceful backup. Those lessons learned and best practices are shared within the NAE to ensure that the near-miss one unit has does not become another's mishap.
- The NAE Safety Guidance aligns with the Commander, U.S. Pacific Fleet's Order Number 1: Safe Operations are Effective Operations. Warfighting and Warfighters deserve safe operations that demonstrate we are ready to win.
- U.S. Pacific Fleet Order #1 and #3: Safety is a byproduct of our PACFLT standard of professionalism and yields effective operations. Professional execution of proven safe practices reduces risks, prevents mishaps, and if they do occur, it prevents those mishaps from turning into disasters. Our professional safety culture is a fleet fundamental that must be ingrained and fostered through professional behavior at all ranks and disciplined leadership by example. To support our safe operations we must practice critical self-assessment, procedural compliance, and continuous improvement. We will think critically to reduce risk, mitigate any assumed risk, while maintaining a questioning attitude, constant vigilance, and re-assessment.



TREATMENT OF SAILORS

Naval Aviation's Role in Readiness and Quality of Life

- The FY26 budget reflects the Navy's commitment to sustaining combat-ready forces while enhancing the quality of life for Sailors. By investing in critical infrastructure and facilities, the Navy ensures that Sailors operate in safe, modern, and efficient environments that support both mission success and personal well-being.

Future-Ready Facilities to Support Modern Platforms and Personnel

- Repairs and upgrades at UH Towers at NAS Lemoore and the Child Development Care facility at NS Norfolk improve operational readiness and the day-to-day experience for Sailors and their families, ensuring reliable facilities and resources to support their needs.
- Efforts like airfield and runway repairs at NAS Whiting Field and NAS Fallon improve operational efficiency, enhance safety, and ensure Sailors train and operate in optimal conditions.
- Military construction projects, such as the Strike Fighter Center of Excellence at NAS Lemoore, prepare the Navy for the future fight and provide state-of-the-art facilities that enhance the working environment for Sailors and civilian personnel supporting advanced platforms.
- Upgrades at the HSC 25 hangar in Guam directly support distributed operations and ensure Sailors stationed overseas have high-quality facilities that contribute to their mission readiness and morale.
- USO Afloat centers increase quality of service and focus on treating Sailors well. The USO center onboard an aircraft carrier provides Sailors with many of the same amenities provided at a land-based USO center to experience an environment of relaxation and decrease deployment-related stressors. USO Afloat centers are onboard USS Dwight D. Eisenhower (CVN 69), USS George Washington (CVN 73), USS George H.W. Bush (CVN 77), USS Ronald Reagan (CVN 76), USS Carl Vinson (CVN 70), USS Abraham Lincoln (CVN 72), and USS Nimitz (CVN 68).

Innovative and Sustainable Solutions for Mission and Quality of Life

- Projects across diverse locations, such as airfield pavement repairs at NAS Jacksonville and taxiway repairs at NB Ventura County Pt. Mugu, maintain the Navy's ability to sustain DMO and ensure Sailors are equipped with reliable, modern infrastructure that supports their operational effectiveness and safety.
- The Navy's focus on programmatic changes and alternative construction materials demonstrates a dual commitment to efficiency and sustainability. Sailors will benefit from infrastructure improvements designed to meet their needs while maintaining fiscal and environmental responsibility.
- Increased connectivity and enhanced bandwidth on deployments provides not only mission benefits, but also benefits to the hard-working crews of our aircraft carriers. These improvements allow Sailors to watch family events, pursue further education, de-stress with entertainment streaming, and more.
- The Navy launched a pilot program to deploy dogs, known as expeditionary facility dogs, to enhance crew morale, unit cohesion, stress management and resilience. The dogs are on loan from Mutts With a Mission, a local Virginia nonprofit organization. Very good girls Sage and Fathom and very good boys Rudder and Demo were deployed on aircraft carriers in 2023 and 2024, providing comfort and companionship alongside existing resiliency programs.



FLEET MANNING

- Today's manning challenges are unprecedented, exacerbated by high operational tempo for CSGs. We must think, act, and operate differently to challenge our business processes and seek outcomes with supporting data that keeps faith with our Sailors and provides commanding officers' people with the resources they need to deliver decisive combat power.
- A vital part of developing a total force strategy and maintaining combat readiness is to provide appropriate incentives to retain skilled personnel for critical NAE billets.
- The Active Component (AC) Aviation Bonus (AvB) Program, consisting of the Aviation Department Head Retention Bonus (ADHRB) and Aviation Command Retention Bonus (ACRB), incentivizes highly talented, hard-working, career-minded Naval Aviators and Naval Flight Officers to choose to remain on active duty.
- Naval Aviation's return on investment is the retention for continued Navy service of our aviation warfighters, with their invaluable, irreplaceable skillsets and leadership.



AVIATION SAILORS



- Enlisted aviation rates are the backbone of Naval Aviation, providing the technical expertise, maintenance proficiency, and operational support essential to sustaining mission-ready aircraft, enabling high-tempo operations, and ensuring the warfighting advantage necessary to dominate in contested environments.
- **Aviation Boatswain's Mate:** supervise the movement of Naval aircraft and perform rescue duties when necessary. In this role, ABHs assist with the launch and recovery of aircraft, spot and secure aircraft and equipment, perform crash rescue and crash removal duties in connection with aircraft launch and recovery, firefight and damage control duties, and operate and maintain ground-handling equipment used for moving and hoisting aircraft.
- **Aviation Electronics Technician:** maintain, troubleshoot, repair, and test complex electronic systems related to aviation on tactical jets, fixed wing aircraft or rotary wing helicopter systems. In this role, ATs work with digital computers, fiber optics, infrared detection, radar, laser electronics, navigation, pressure indication, and electrical power generation and distribution.
- **Aviation Structural Mechanic:** maintain and repair all aircraft structural components, from the cockpit control panels to the landing gear and everything in between. In this role, AMs maintain and repair onboard systems such as hydraulic pumps, auxiliary power systems, landing gear, brakes, and pneumatic systems, and perform daily preflight, postflight, and other aircraft inspections.
- **Aviation Machinist's Mate:** maintain and prepare aircraft for flight by inspecting, repairing, and overhauling aircraft engines and propellers. In this role, ADs install, maintain, and service aircraft engines, fuel and lubrication systems, drive accessories, and gear boxes.
- **Naval Aircrewman [Avionics, Helicopter, Mechanical, Operator, Tactical]:** flight crewmember in a fixed wing, helicopter, or unmanned aerial system squadron. Responsibilities can vary from detecting and tracking, communications, weapons delivery, search and rescue, passenger and cargo transport, aerial photography, and unmanned aerial vehicle operation.

NAVAL AIR FORCE RESERVE

The reserve component of Naval Aviation falls under Commander, Naval Air Force Reserve (CNAFR). Reserve aviation units deploy operationally around the world, sustain enduring detachments and enable fleet deployments through training and logistics support. CNAFR is laser-focused on warfighting readiness and providing strategic depth at a cost savings to the active component while meeting worldwide demand requirements of combatant commanders and the naval service.

CNAFR Provides:

- Significant strategic depth to the active component with several operational and ready-to-deploy squadrons and squadron augment units (SAUs) across all warfare specialties within Naval Aviation. Reserve squadrons operating the P-8A Posidon, the MH- 60R Sea Hawk, and the EA-18G Growler conduct scheduled deployments to relieve active component deployment schedules or to provide surge combat capabilities.
- Contested logistics capabilities using the C-40A Clipper, KC-130T Hercules, and KC-130J Super Hercules provide global, on-demand worldwide airlift and combat logistics at a cost savings of \$1.2 billion. The integration of our air logistics forces with U.S. Pacific Fleet and NAWDC is vital to the ongoing efforts with the Mobile Logistics Campaign Plan and Operation Plan development.
- CNAFR provides highly trained adversary aircrew and aircraft including the F-5 Tiger II, F/A-18E/F Super Hornet and F-16 Fighting Falcon that deliver required training to active component squadrons and ships with over 21,000 sorties per year.
- Tier 1/2/3 transport to senior service officials like the Secretary of Defense (SECDEF) with on-demand airlift that provides continuous, secure enroute communications capabilities using the C-37.
- CNAFR SAUs provide 10-20 percent of all student training, pre-deployment training and direct operational support to the NAE across all training platforms.
- CNAFR's Fleet Readiness Center provides intermediate-level repair of aircraft components to more than 300 aircraft and their associated gear.



NAVAL ASTRONAUT PROGRAM

History of Navy Involvement in Space

- The Navy has been integral to the U.S. space program since its inception. Naval Aviators were among the first astronauts selected for Project Mercury in the 1950s, laying the groundwork for human spaceflight.

- **The U.S. Navy has produced the largest number of astronauts with Naval Aviators, flight officers, and technical experts playing a pivotal role in America's space exploration efforts.**

- Since the Mercury, Gemini, and Apollo programs, Navy personnel continue to represent the service in every phase of NASA's human space exploration efforts, including Space Shuttle missions and the International Space Station (ISS).

Selection and Training

- Navy astronauts are typically selected from the ranks of Naval Aviators, flight officers, engineers, and medical officers with exemplary records of service, technical expertise, and leadership.

Candidates undergo rigorous astronaut training, including:

- Flight training and spacecraft systems operations.
- Simulated zero-gravity and emergency response exercises.
- Specialized training for extravehicular activities (spacewalks) and scientific research aboard the ISS.
- Navy astronauts may serve as pilots, mission specialists, or commander roles, contributing to mission planning, operations, and leadership during space exploration missions.

Current Contributions

- **ISS:** Navy astronauts continue to support operations aboard the ISS, conducting scientific research, technology testing, and international collaboration in space.

- **Artemis II Mission:** Four astronauts will venture around the Moon on Artemis II, the first crewed mission on NASA's path to establishing a long-term presence at the Moon for science and exploration through Artemis. The 10-day flight will test NASA's foundational human deep space exploration capabilities, the SLS rocket, Orion spacecraft, for the first time with astronauts.

- **Technological Advancements:** Navy expertise contributes to space systems development, particularly in navigation, communications, and resilience in harsh environments—key elements that overlap with maritime and space operations.

- **The U.S. Navy Astronaut Program embodies a legacy of excellence, innovation, and service, demonstrating the Navy's commitment to exploration and its vital role in advancing U.S. interests in space.**

- **The skills developed by Navy astronauts enhance not only space exploration but also naval capabilities in areas like aviation, navigation, and systems integration.**

- **As space becomes an increasingly contested domain, the Navy Astronaut Program reflects the service's broader focus on integrating space operations into its strategic framework.**



ACTIVE-DUTY U.S. NAVY ASTRONAUTS

Capt. Victor Glover



- Selected as an astronaut in 2013 while serving as a Legislative Fellow in the United States Senate. He most recently served as pilot of the Crew-1 dragon spacecraft, named Resilience, which flew to the International Space Station, where he also served as Flight Engineer for Expedition 64/65. Glover has been assigned as Pilot of NASA's Artemis II mission around the Moon.
- The California native earned an undergraduate engineering degree as a two-sport athlete, while serving his community. Glover is a Naval Aviator and was a test pilot in the F/A-18 Hornet, Super Hornet and EA-18G Growler.

Cmdr. Matthew Dominick



- Selected by NASA to join the 2017 Astronaut Candidate Class. He reported for duty in August 2017. He most recently launched to the International Space Station March 3, 2024, as commander of NASA's SpaceX Crew-8 mission. He served as a flight engineer aboard the orbiting laboratory. NASA's SpaceX Crew-8 mission successfully splashed down off Pensacola, Florida, concluding a nearly eight-month science mission and the agency's eighth commercial crew rotation mission to the International Space Station.
- The Colorado native earned a Bachelor of Science in Electrical Engineering from the University of San Diego and a Master of Science degree in Systems Engineering from the Naval Postgraduate School. He graduated from U.S. Naval Test Pilot School. He has more than 1,600 hours of flight time in 28 aircraft, 400 carrier-arrested landings, and 61 combat missions.

Cmdr. Jack Hathaway



- Selected by NASA to join the 2021 Astronaut Candidate Class. He reported for duty in January 2022. The Connecticut native earned bachelor's degrees in physics and history from the U.S. Naval Academy, Annapolis, Maryland, and completed graduate studies at Cranfield University, England, and the U.S. Naval War College, Newport, Rhode Island.
- A distinguished Naval Aviator, Hathaway flew and deployed with Strike Fighter Squadron (VFA) 14 aboard the USS Nimitz (CVN 68) and VFA-136 aboard the USS Harry S. Truman (CVN 75), graduated from Empire Test Pilots' School, supported the Joint Chiefs of Staff at the Pentagon, and was most recently assigned as the prospective executive officer for VFA-81. He has over 2,500 flight hours in 30 types of aircraft, more than 500 carrier arrested landings, and flew 39 combat missions.

Lt. Cmdr. Jonny Kim



- Selected by NASA in 2017. He is a dual designated Naval Aviator and Flight Surgeon, and as a former Navy SEAL has completed more than 100 combat operations. The California native was commissioned as a naval officer through an enlisted-to-officer program and earned his degree in mathematics at the University of San Diego and a Doctor of Medicine at Harvard Medical School.
- During his first mission to the International Space Station, NASA astronaut Jonny Kim will serve as a flight engineer and member of the upcoming Expedition 72/73 crew. Kim will launch on the Roscosmos Soyuz MS-27 spacecraft in March 2025, accompanied by Roscosmos cosmonauts Sergey Ryzhikov and Alexey Zubritsky for an eight-month mission on the space station.

Lt. Cmdr. Jessica Wittner



- Jessica Wittner was selected by NASA to join the 2021 Astronaut Candidate Class. She reported for duty in January 2022. She previously had a distinguished career serving on active duty as a U.S. Naval Aviator and test pilot. A California native, she holds a bachelor's in aerospace engineering from the University of Arizona, Tucson, and a master's in aerospace engineering from the U.S. Naval Postgraduate School, Monterey, California. Wittner was commissioned as a naval officer through an enlisted-to-officer commissioning program and served operationally flying F/A-18E/F Super Hornets with VFA-34 in Virginia Beach, Virginia, and VFA-151 in Lemoore, California. A graduate of U.S. Naval Test Pilot School, she also worked as a test pilot and project officer with Air Test and Evaluation (VX) 31 in China Lake, California.

FORMER U.S. NAVY ASTRONAUTS

Capt. (Retired) Sunita Williams

• Selected as an astronaut by NASA in 1998 and is a veteran of two space missions, Expeditions 14/15 and 32/33. NASA astronauts Sunita Williams and Butch Wilmore launched aboard Boeing's Starliner spacecraft on June 5, 2024, for its first crewed flight, arriving at the space station on June 6. Following the agency's decision to return Starliner uncrewed, the duo is currently living and working aboard the space station as part of the Expedition 71/72 crew and will return home in February 2025 aboard the SpaceX Dragon spacecraft.



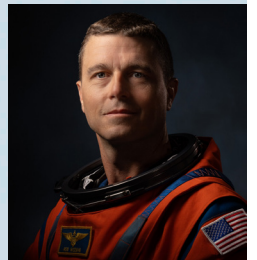
Capt. (Retired) Barry Wilmore

• Selected as an astronaut by NASA in 2000. To date Wilmore has logged 178 days in space. He completed his first flight as pilot on STS-129 where he logged more than 259 hours (11 days) in space. From September to November 2014, he served as Flight Engineer aboard the International Space Station for Expedition 41 and then as commander of Expedition 42 from November 2014 to March 2015 totaling 167 days in space.

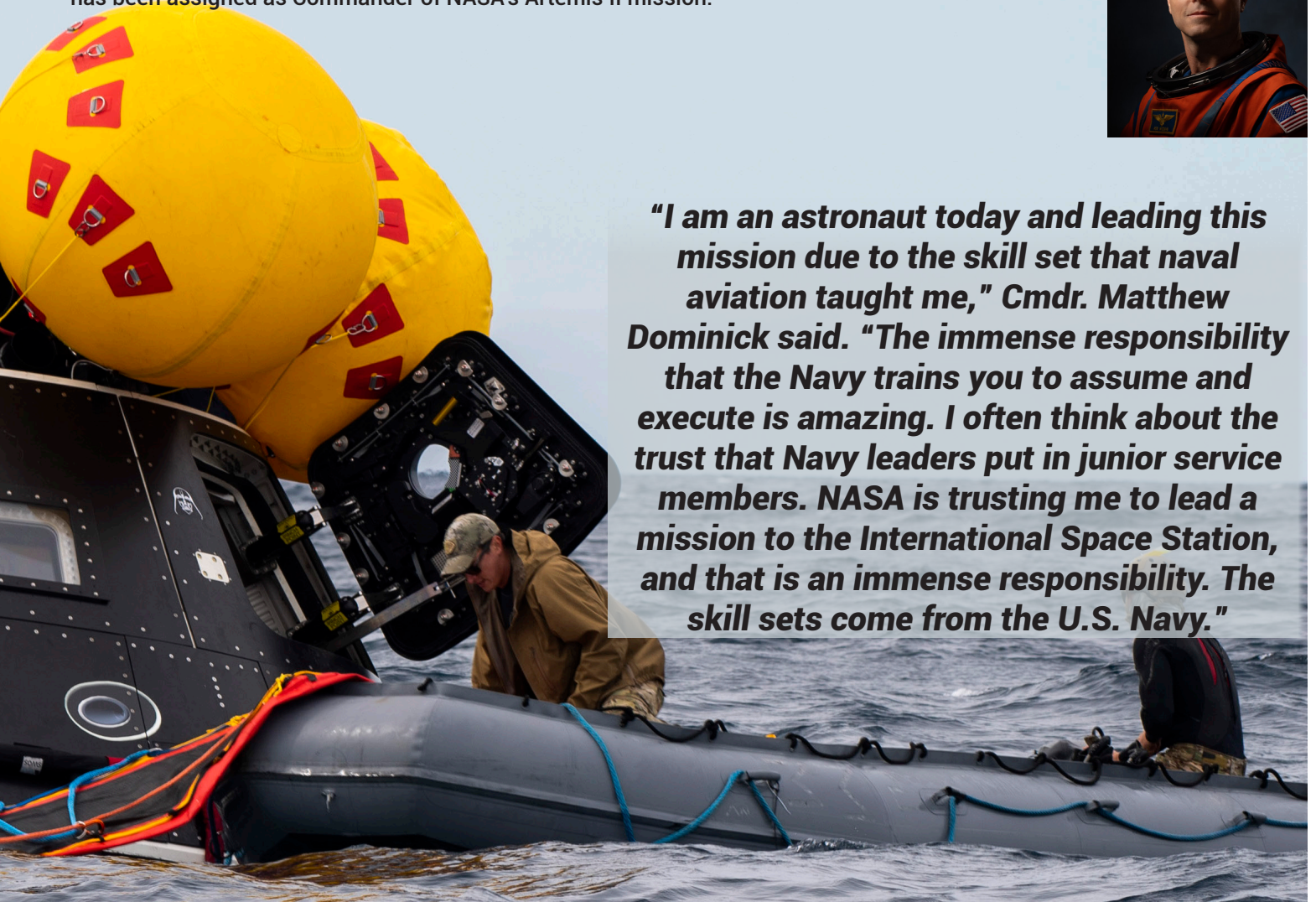


Capt. (Retired) Reid Wiseman

• Selected as an astronaut by NASA in 2009. Served as Flight Engineer aboard the International Space Station for Expedition 41. He served as chief of the astronaut office from 2020 through 2022. Wiseman has been assigned as Commander of NASA's Artemis II mission.



"I am an astronaut today and leading this mission due to the skill set that naval aviation taught me," Cmdr. Matthew Dominick said. "The immense responsibility that the Navy trains you to assume and execute is amazing. I often think about the trust that Navy leaders put in junior service members. NASA is trusting me to lead a mission to the International Space Station, and that is an immense responsibility. The skill sets come from the U.S. Navy."



U.S. NAVY 250TH BIRTHDAY

2025 brings immense opportunity to showcase Naval Aviation and strengthen public trust, inspire a national call to naval service, and underscore the role of Naval Aviation in national security.

Outreach opportunities include Fleet Weeks, Navy Weeks, airshows, flyovers, Hollywood entertainment, and Navy Recruiting Command products.

250 Years of America's Navy

- 2025 marks an unmissable opportunity to inform and engage audiences about America's Warfighting Navy. Navy 250 celebrations and events can be levered to showcase Naval Aviation and strengthen public trust, inspire a national call to naval service, and underscore the role of Naval Aviation in national security. We must communicate to compete and seize any opportunity to present a strong, unified, mission-focused Navy.

250 Years of Warfighting

- For 250 years, our Navy has forged enduring alliances that are essential to the Navy's maritime warfighting capabilities. These partnerships have allowed us to project power, protect sea lanes, and safeguard global security.
- Through dozens of multilateral exercises and operations each year, we project power across all domains demonstrating our Navy's global reach and commitment to maritime security.
- As the world's most powerful Navy, we are ready to deter aggression, protect freedom of the seas and respond to any challenge.

250 Years of Warfighters

- Though America's Navy operates the world's most sophisticated weapons systems, it is our highly skilled people – at sea and ashore – who provide an unmatched advantage.
- Our Sailors and civilians are trained and ready with the right skills, tools, training and mindset to protect America's interests around the world.
- Service in the Navy is more than just a job. It represents a chance to become the best version of ourselves.

250 Years of Foundation

- For 250 years, our Navy has been a leader in maritime innovation and technology, making us the world's most powerful naval force.
- The Navy continues to partner with industry to increase throughput and capacity. Industry partners are part of our warfighting foundation.
- We are making targeted investments to improve supply chain resiliency, strengthen workforce recruitment and retention and increase the application of advanced technologies.



WHO WE ARE

We are Naval Aviation. Our core competency is the projection of combat power from a flight deck or a forward base. We are the men and women of Naval Aviation, men and women who have all worked hard to earn our wings. We wear these wings with the great pride they deserve. We influence events in this unsettled world by engaging forward with our presence and power. Our service puts us in harm's way far from our families, often for significantly long intervals. What we do is hard and oftentimes dangerous, but it is bigger than all of us, so we do it as a team. Hardships are shared. All of us are part of a competent, professional Naval Air Force, which has no equal in air combat. What drives us is the richness of life and experience, which can be found nowhere else. Our duty is mission accomplishment. We lead our men and women with compassion.

**WE SERVE OUR COUNTRY
WE EXCEL IN THE AIR
WE MAKE A DIFFERENCE**

MISSION

DELIVER COMBAT-READY NAVAL AIR FORCES THAT WIN

"We win as a team by conducting safe and effective operations and relentlessly pursuing excellence."

VALUES



FOUNDATION

SAFE OPERATIONS

"We Serve, We Excel, We Make a Difference."

VADM Dan "Undra" Cheever
Commander, Naval Air Forces
AIR BOSS #10



FLY NAVY-PREPARE TO WIN