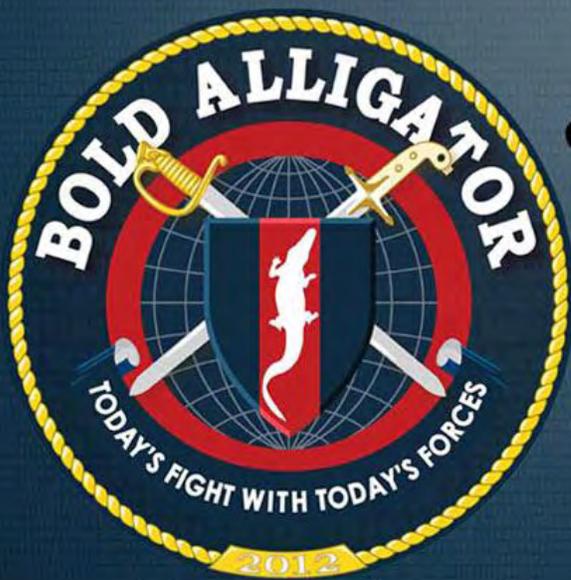


# **BOLD ALLIGATOR**

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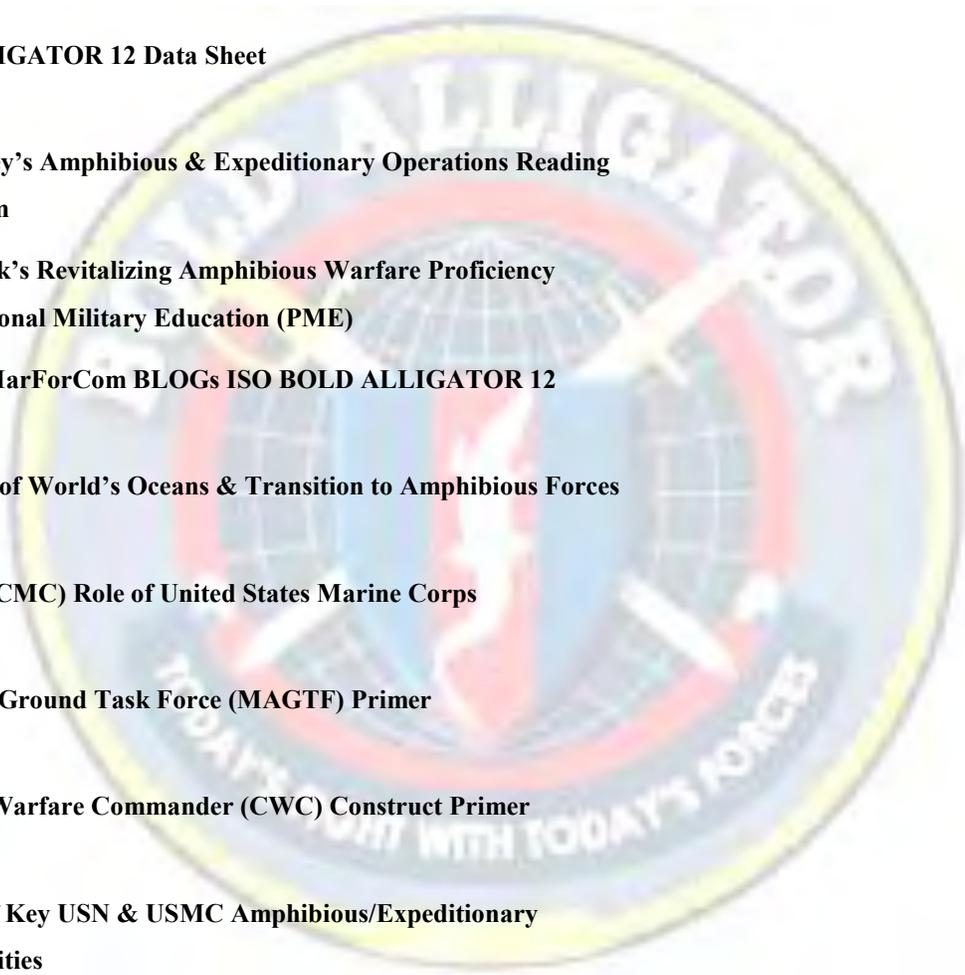
**2012**



**Revitalizing Navy/Marine Corps Fundamental Amphibious Capabilities  
and Reinvigorating its Traditional Role as Fighters From The Sea.**

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# United States Navy Biography

## **Admiral John C. Harvey, Jr. Commander, U.S. Fleet Forces Command**

Born and raised in Baltimore, Md., Adm. John C. Harvey was commissioned from the U. S. Naval Academy in 1973 and immediately commenced training in the Navy's Nuclear Propulsion program.

Harvey has served at sea aboard USS Enterprise (CVN 65), USS Bainbridge (CGN 25), USS McInerney (FFG 8), as reactor officer aboard USS Nimitz (CVN 68), and as executive officer on USS Long Beach (CGN 9). He commanded USS David R Ray (DD 971), USS Cape St. George (CG 71) and Cruiser-Destroyer Group Eight/Theodore Roosevelt Strike Group. He has deployed to the North and South Atlantic; the Mediterranean, Baltic and Red seas; the Western Pacific, Indian Ocean, and the Persian Gulf.



Ashore, he served three tours at the Bureau of Naval Personnel in a variety of billets including surface nuclear officer detailer, CGN/CVN placement officer, surface nuclear program manager in N13, legislative adviser to chief of naval personnel (CNP), executive assistant to CNP and as director, Total Force Programming and Manpower Management Division (OPNAV N12). He has also served as the senior military assistant to the under secretary of defense (Policy), and on the Navy staff as deputy for Warfare Integration (OPNAV N7F). Most recently, he served as the 54th chief of naval personnel/OPNAV N1 and as the director, Navy staff (OPNAV).

Harvey assumed command of U.S. Fleet Forces Command in July 2009.

Harvey's education includes Phillips Exeter Academy, 1969; U.S. Naval Academy, Bachelor's degree in Political Science, 1973; Harvard University, John F. Kennedy School of Government Master's degree in Public Administration, 1988.



**Lieutenant General Dennis J. Hejlik**  
**Commander, United States Marine Corps Forces**  
**Command; Commanding General, Fleet Marine**  
**Force Atlantic; Commander, United States**  
**Marine Corps Bases Atlantic; Commander,**  
**United States Marine Corps Forces Europe**

Lieutenant General Hejlik is the Commander, United States Marine Corps Forces Command; Commanding General, Fleet Marine Force Atlantic; Commander, United States Marine Corps Bases Atlantic; Commander, United States Marine Corps Forces Europe.

LtGen Hejlik enlisted in the Marine Corps in 1968, was honorably discharged as a sergeant in 1972 and was commissioned through the PLC program.

He is a graduate of the Amphibious Warfare School, The Command and Staff College, and The Naval War College.

LtGen Hejlik's command assignments include: Platoon Commander and Company Commander, 2nd Battalion, 5th Marine Regiment. Platoon Commander Marine Barracks, Yorktown, VA; Commanding Officer, Weapons Company, 3rd Battalion, 8th Marines; Commanding Officer 1st Battalion, 2nd Marines; Commanding Officer Marine Barracks, Washington, DC; Commander 1st Marine Expeditionary Brigade, I Marine Expeditionary Force; Commander U. S. Marine Corps Forces Special Operations Command; Commanding General, II Marine Expeditionary Force.

LtGen Hejlik's staff assignments include: 3rd Marine Division aide-de-camp to the Commanding General; Battalion Logistics Officer (S-4) 3rd Battalion, 8th Marines; Tactics Instructor at Amphibious Warfare School; Executive Officer of the 2d Marine Regiment; G-3 Current Operations Officer, I MEF Operation Desert Storm; 2nd Marine Division G-1A; Enlisted Assignment Section, Manpower and Reserve Affairs; Senior Military Fellow with the Council on Foreign Relations; Military Secretary to the Commandant of the Marine Corps; Deputy Commanding General, I Marine Expeditionary Force; The Principal Director for Special Operations and Combating Terrorism in SOLIC/OSD; U.S. Special Operations Command, Chief of Staff; Director, Center for Policy, Training and Readiness, U.S. Special Operations Command.

LtGen Hejlik's personal decorations include the Defense Superior Service Medal with Gold Star, Legion of Merit with Gold Star, Meritorious Service Medal with two Gold Stars, Navy Marine Corps Commendation Medal, Navy Marine Corps Achievement Medal, Combat Action Ribbon, Good Conduct Medal, and the Leftwich Award.





## **Lieutenant General John M. Paxton, Jr. Commanding General, II Marine Expeditionary Force; and Commander, United States Marine Forces Africa**

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Lieutenant General Paxton is the Commanding General, II Marine Expeditionary Force; and Commander, United States Marine Forces Africa. Prior to his current assignment he served as Director for Operations, J-3, The Joint Staff and before that as the Chief of Staff for Multi-National Force Iraq in Baghdad. Additional General officer assignments include Commanding General, 1st Marine Division, Commanding General, Marine Corps Recruit Depot/Western Recruiting Region, and Assistant Deputy Commandant of the Marine Corps, Programs and Resources (Director Programs).



Lieutenant General Paxton graduated from Cornell University in Ithaca, New York with Bachelor of Science and Master of Civil Engineering degrees. He was commissioned into the Marine Corps in 1974 through Officer Candidate School. A career Marine infantryman, the general has commanded Marines at every level from platoon through division and has served and commanded in all three active Marine Divisions (1st Bn, 3d Mar; 2nd Bn, 4th Mar; 3rd Bn, 5th; 1st Bn, 8th Mar; 1st Mar; 1st Mar Div). Lieutenant General Paxton has also served as an operations, plans and training (G3-S3) officer within Fleet Marine Force units at the battalion, regiment, division and Marine Expeditionary Force levels.

In addition to service in Iraq, Lieutenant General Paxton has operational tours supporting stability efforts in the Bosnian conflict with Landing Force Sixth Fleet (LF6F) and in Mogadishu, Somalia as United Nations Quick Reaction Force (QRF), both while commanding Battalion Landing Team (1/8). Other staff and joint assignments include the Military Assistant to the Under Secretary of the Navy, Amphibious Operations Officer and Executive Officer Crisis Action Team (CAT) at UNC/CFC/USFK in Korea; and in Strategic Plans Branch, Deputy Commandant Plans, Policies and Operations, Headquarters US Marine Corps. Supporting establishment commands include Company B, Marine Barracks 8th & I as a Captain and Marine Corps Recruiting Station New York, New York as a Major.

In addition to The Basic School, Lieutenant General Paxton's professional education includes United States Marine Corps Amphibious Warfare School (non resident), United States Army Infantry Officer Advanced Course, and the United States Marine Corps Command and Staff College. He was a Federal Executive Fellow in Foreign Policy Studies at the Brookings Institution as a Lieutenant Colonel, as well as a Military Fellow at the Council on Foreign Relations as a Colonel. He has also been a Marine Corps Fellow at Massachusetts Institute of Technology's Seminar XXI.

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# United States Navy Biography

## Vice Admiral David H. Buss Deputy, U.S. Fleet Forces Command

Vice Adm. Buss, a native of Lancaster, Pa., graduated with distinction from the United States Naval Academy in 1978. He was designated a naval flight officer in 1979 and completed initial training in the venerable A-6 Intruder later that year.

Buss' flying assignments at sea include Attack Squadron 65 embarked in USS *Dwight D. Eisenhower* (CVN 69) in the early 1980s and Attack Squadron 36 embarked in USS *Theodore Roosevelt* (CVN 71) during Operation *Desert Storm*. He commanded Attack Squadron 34, The Blue Blasters, embarked in USS *George Washington* (CVN 73) while conducting operations in Bosnia and Iraq. The Blasters were one of the Navy's last A-6 squadrons. Buss also served at sea as flag lieutenant for Commander, Carrier Group 8 embarked in USS *Nimitz* (CVN 68).



Following Nuclear Power training, Buss served at sea as executive officer in *Nimitz*. He commanded USS *Sacramento* (AOE 1) during the opening stages of Operation *Enduring Freedom* following the terrorist attacks on 9/11. Buss commanded USS *John C. Stennis* (CVN 74) from 2003 through 2006, deploying to the Western Pacific in support of 7th Fleet operations.

Buss' shore assignments include tours as a Fleet Replacement Squadron instructor with Attack Squadron 42 and as the readiness officer with Medium Attack Wing One. He completed his initial joint duty assignment at the Joint Warfighting Center, Hurlburt Field, Fla. Buss also served as assistant chief of staff, Readiness/Requirements (N8) for commander, Naval Air Forces, in San Diego, Calif.

As a flag officer, Buss served on the OPNAV staff as well as serving for 14 months in Baghdad as director, Strategy/Plans/Assessments (J-5) for Gen. David Petraeus and Gen. Ray Odierno.

Buss commanded Carrier Strike Group 12/*Enterprise* Carrier Strike Group, returning *Enterprise* (CVN 65) and group to the fleet following more than two years in maintenance, and he recently served as Director, Naval Warfare Integration Group (N00X) for CNO.

Buss' personal awards include the Legion of Merit (5 awards), Distinguished Flying Cross (with Combat V), Bronze Star Medal, and Air Medal (5 individual, 4 strike/flight awards). He was the recipient of the 1991 East Coast Naval Flight Officer of the Year and 1991 Intruder of Year awards.



# United States Navy Biography

## Rear Admiral Dennis E. FitzPatrick Commander, Strike Force Training Atlantic

Rear Admiral FitzPatrick, a native of Delmar, N.Y., graduated from Cornell University in 1981 with a Bachelor of Science degree in Electrical Engineering. He received his commission in May 1981 and was designated a naval aviator in March 1983. He earned a master's degree in National Security and Strategic Studies from the Naval War College, and is a graduate of the Navy Nuclear Power Program and attended the Joint Forces Staff College in Norfolk.



His operational assignments included duty at Attack Squadron 105 completing deployments to the Western Pacific as a component of Marine Air Group 12 and in the Mediterranean in USS *Forrestal* (CV 59) flying the A-7E Corsair II; Strike Fighter Squadron 86 flying the FA-18 Hornet embarked in USS *America* (CV 66) in support of Operations *Desert Storm*, *Desert Shield* and *Southern Watch* as well as follow on operations in the Mediterranean Sea, Persian Gulf and North Atlantic; Strike Fighter Squadron 147 as the executive officer and subsequently commanding officer embarked in USS *Nimitz* (CVN 68) for an around-the-world deployment, which included operations in support of *Southern Watch*; executive officer of USS *Theodore Roosevelt* (CVN 71) deploying in support of Operation *Enduring Freedom*; command of USS *Shreveport* (LPD 12) completing a major overhaul and a successful Interdeployment Training Cycle; command of the USS *John F. Kennedy* (CV 67) where he completed a deployment in support of Operation *Iraqi Freedom* and operations along the east coast of the United States; and a tour as an individual augmentee on the headquarters staff, Multi-National Force - Iraq.

Ashore, he served on board Strike Fighter Squadron 106, flying FA-18 Hornets as an instructor pilot; The Bureau of Naval Personnel where he served as the A-7/FA-18 community detailee; United States Joint Forces Command as the deputy director of the strategy and analysis directorate; U.S. Fleet Forces Command as head; Warfare Requirements and Programming, Planning Branch. His first flag assignment was the director, Joint Operations Division, U.S. Fleet Forces Command. His current assignment is as commander, Strike Force Training Atlantic.

He has over 3,100 hours and 655 carrier arrested landings. His awards include the Legion of Merit, Bronze Star Medal, Meritorious Service Medal; Air Medal (two individual/three strike flight) with combat V; Joint Commendation Medal, Navy and Marine Corps Commendation Medal with three Gold Stars and Combat V; Navy and Marine Corps Achievement medal and various unit and campaign awards.



## **Brigadier General Christopher S. Owens Deputy Commanding General, II Marine Expeditionary Force; and Commanding General, 2d Marine Expeditionary Brigade**

BGen Christopher Owens grew up in Oregon and was commissioned in 1982. Earning his “wings of gold” in September 1984, 2ndLt Owens was assigned to HML-367 as an AH-1 pilot, where he served in various billets, deployed with the squadron twice and attended Weapons and Tactics Instructor Course in 1987. He was promoted to captain in November of that year.

In July 1988, Capt Owens reported to 1st Tank Battalion as a forward air controller. He returned to MAG-39 and HMT-303 in August 1989, where he served as AH-1J and AH-1W NATOPS Officer.

In February 1992 Capt Owens rejoined HMLA-367, and served as DOSS, Logistics Officer, and AMO. He deployed with the squadron in 1992, and with HMM-166 (REIN) as part of 15th MEU in 1994, participating in operations in Somalia. He was promoted to Major in September 1994.

Maj Owens attended USMC Command and Staff College in 1995. A distinguished graduate, he was selected to attend the School of Advanced Warfighting (SAW) the following year. Upon graduation from SAW, he joined I MEF, where he was responsible for the development of I MEF’s supporting plan for operations in the Pacific Region.

Promoted in July 1999, LtCol Owens reported to MAG-39, and served as Executive Officer, HMLA-267 and Commanding Officer, HMLA-169. LtCol Owens completed Marine Corps War College in 2003 as a distinguished graduate, and then served as Director of SAW. He was promoted to Colonel in October 2004.

Col Owens assumed command of MAG-29 in July 2005. In January 2007, he deployed with MAG-29 in support of Operation Iraqi Freedom 06-08. Col Owens relinquished command of MAG-29 in July 2007 and reported to USJFCOM, where he served as a department head, then Chief of Staff for the Joint Concept Development and Experimentation Directorate.

Upon selection for Brigadier General in August of 2008, he was assigned as Chief of Staff, Naval Striking and Support Forces NATO.

Brigadier General Owens reported to his current assignment as Deputy Commanding General of II Marine Expeditionary Force in July 2010. His personal decorations include the Defense Superior Service Medal, Legion of Merit, Defense Meritorious Service Medal, Meritorious Service Medal, Strike/Flight Air Medal, Navy and Marine Corps Commendation Medal, and Navy Achievement Medal. He has accumulated over 4000 flight hours in a variety of type/model/series aircraft.





## **Brigadier General Paul W. Brier** **Vice Commander, U. S. Marine Corps Forces** **Command**

Brigadier General Brier currently serves as Vice Commander, U.S. Marine Corps Forces Command.

His previous general officer assignments include Commander, U.S. Marine Forces Europe; Commander, U.S. Marine Forces Africa, supporting operations ONWARD LIBERTY (Liberia) and ENDURING FREEDOM - TRANS SAHARA and HORN OF AFRICA; and Deputy Joint Force Maritime Component Commander for Operation ODYSSEY DAWN (Libya). He has also served as Deputy Commander, U.S. Marine Forces Europe, and Deputy Commander, U.S. Marine Forces Africa.



As a colonel, he commanded the 6th Civil Affairs Group in al-Anbar Province during Operation IRAQI FREEDOM, led the U.S. Marine Forces Central Command Coordination Element in Afghanistan during Operation ENDURING FREEDOM – AFGHANISTAN, and served at the Pentagon as Marine Corps Service Planner and Deputy Executive Assistant to the Deputy Commandant for Plans, Policies, and Operations, Headquarters, U.S. Marine Corps. He also served as Chief of Staff, 2d Marine Division; Chief of Staff (IMA), II Marine Expeditionary Force; and U.S. Marine Corps liaison to the Territory of Guam.

As a lieutenant colonel he commanded 3rd Battalion, 14th Marines. He also served as Chief, Civil Affairs Branch (J-7/Joint Warfighting Center), U.S. Joint Forces Command; Plans Officer, Strategy and Plans Branch, Headquarters, U.S. Marine Corps; and Artillery Officer, II Marine Expeditionary Force Augmentation Command Element.

As a major, he commanded a civil affairs team of the 4th Civil Affairs Group and served as the operations officer and executive officer of 3rd Battalion, 14th Marines.

As a company grade officer he commanded a howitzer battery with the 1st Marine Division in the defense of Saudi Arabia and liberation of Kuwait during operations DESERT SHIELD and DESERT STORM. He also served as Officer Selection Officer, Seattle; platoon commander and fire direction officer in the 7th Marine Amphibious Brigade; and tank company executive officer and artillery battery fire direction officer, executive officer, and commanding officer in the 4th Marine Division.

Commissioned through the Naval ROTC Scholarship Program at the Virginia Military Institute into the U.S. Marine Corps in 1981, he transferred to U.S. Marine Corps Reserve in 1986.

He received his Bachelor of Science degree in civil engineering from the Virginia

Military Institute in 1981 and his Master of Strategic Studies degree from the U.S. Army War College in 2003. He is a graduate of the Marine Corps Command and Staff College, Joint Forces Staff College, Air War College, and Defense Resources Management Institute at the Naval Postgraduate School. His education also includes studies at the Royal Navy Maritime Warfare Centre (HMS DRYAD), Finnish Defense Force International Centre, Joint Special Operations University, Naval War College, and John F. Kennedy School of Government and Graduate School of Design at Harvard University. His awards include the Legion of Merit and the Bronze Star Medal with combat "V" and gold star.

Brigadier General Brier's civilian career includes over 20-years experience in the civil engineering and architectural fields. A registered professional engineer (civil/structural) in the Commonwealth of Virginia, he designed bridges for the Virginia Department of Transportation for five years. In 1991, he was appointed Assistant Circuit Executive for Space and Facilities, U.S. Court of Appeals for the Fourth Circuit, where he manages the federal Judiciary's facilities program in the states of Maryland, Virginia, West Virginia, and North and South Carolina.

Born in Monterey, California, Brigadier General Brier grew up in a Marine family and graduated from St. Stephen's School in Alexandria, Virginia. He and his wife, Rhonda, have two children: Austin (19) and Allison (14).



# United States Navy Biography

## Rear Admiral Walter E. "Ted" Carter, Jr. Commander, Carrier Strike Group 12

Rear Adm. Carter, a native of Pascoag, R.I., graduated from the U.S. Naval Academy in 1981 and was designated a naval flight officer in 1982. He graduated from the U.S. Navy Fighter Weapons School (Top Gun) in the last all-Phantom class in 1985.

Carter's sea assignments include: Fighter Squadron (VF) 161 RockRivers aboard *USS Midway* (CV 41) flying the F-4S Phantom II; VF-21 Freelancers flying the F-14A Tomcat aboard *USS Independence* (CV 62); Carrier Air Wing Five as operations officer; VF-14 Tophatters as executive Officer and commanding Officer; and executive officer aboard *USS Harry S. Truman* (CVN 75). He commanded *USS Camden* (AOE 2) and *USS Carl Vinson* (CVN 70).



Shore assignments include: instructor duty at VF-124 Gunslingers flying the F-14A Tomcat, and chief staff officer; and, Fighter Wing Pacific at Naval Air Station Miramar, Calif. Carter completed three joint tours as executive assistant to the Deputy Commander, U.S. Central Command; chief of staff for Joint Warfighting Center, U.S. Joint Forces Command, and Commander, Joint Enabling Capabilities Command, U.S. Joint Forces Command where he served as lead for the Transition Planning Team in the disestablishment of U.S. Joint Forces Command in August 2011.

Carter is the recipient of the U.S. Navy's prestigious Vice Admiral James Bond Stockdale Leadership Award while commanding VF-14 and the U.S. Navy League's John Paul Jones Award for Inspirational Leadership while commanding *Carl Vinson*.

He has accumulated over 5,750 flight hours in F-14, F-18, and F-4 aircraft with over 1,800 carrier-arrested landings onboard 18 aircraft carriers including all 11 active carriers. His personal decorations include the Defense Superior Service Medal (two awards), Legion of Merit (two awards), Distinguished Flying Cross with Combat V, Bronze Star, Defense Meritorious Service Medal, Meritorious Service Medal (four awards), Air Medal (two Combat V and five strike flight), and various service medals and unit awards.

In October 2011, Carter assumed command of Carrier Strike Group 12 embarked aboard *USS Enterprise* (CVN 65).



# United States Navy Biography

## Rear Admiral Kevin D. Scott Commander, Expeditionary Strike Group 2

Rear Admiral Scott assumed duties as Commander, Expeditionary Strike Group 2 in July 2010.

A native of Portsmouth, Va., and New York City, N.Y., Scott was designated a naval aviator in 1984.

Scott previously commanded Helicopter Mine Counter Measures Squadron (HM) 14, which under his command was awarded the Commander Naval Air Force Atlantic Fleet Battle "E" Efficiency Award for 2001. He also commanded Mine Countermeasures Squadron One as commodore.

His operational sea assignments included: HM-14 legal officer, Aircraft Division officer and maintenance test pilot (1985-1987); flight deck officer aboard USS *Inchon* (LPH 12); and HM-14 admin officer, operations officer and detachment officer in charge (1994-1996).

Ashore he served as Air Combat placement officer, Bureau of Naval Personnel; wing operations officer, Commander Tactical Wing Atlantic; military aide to the vice president (1997-1999); current operations chief and division chief, Joint Forces Command; director of aviation officer Distribution Division (PERS 43), Naval Personnel Command; and acting director, Expeditionary Warfare Division, Washington DC.

He is a graduate of the State University of New York at Buffalo, Naval Postgraduate School, U.S. Naval War College, and the Joint Forces Staff College. He holds a Masters of Arts degree in National Security and Strategic Studies.

His personal decorations include the Defense Superior Service Medal, Legion of Merit (3), Joint Meritorious Service Medal, Navy Meritorious Service Medal (2), Navy League 2008 Dalton L. Baugh Leadership Award, and various campaign and service ribbons.



# BOLD ALLIGATOR 2012

## History & Background Information

### Initial CMC Guidance

The BOLD ALLIGATOR Series got its genesis from CMC and CNO initial guidance dating back to 2008. In July of 2008 the Commandant of the Marine Corps called for a “revitalization of our amphibious competency ... initial aiming point for regaining our amphibious forcible entry capabilities is training to ESG-MEB CE amphibious assault requirements.” A CMC message from 2008 further stated, “I am directing that we conduct a series of workshops...and the intent of this initial series is to achieve the staff proficiency required to robustly exercise simulation-supported and real-world ESG-MEB CE planning and execution.”

### Initial CNO Guidance

The CNO followed suite with guidance in 2009 that, “Operations and procurement plans address the capabilities of both our Navy and Marine Corps. Marine Corps roots are at sea. Navy ships underpin expeditionary operations, thus our procurement resources are intertwined. We must integrate warfighting capabilities with the Marine Corps to meet the objectives of the Maritime Strategy and Naval Operations Concept. Effective integration must include Navy and Marine Corps consensus on operational matters and resource allocation.”

### Common USN/USMC Goals

The focus of the BOLD ALLIGATOR exercise is based on the common goal of the Navy and Marine Corps leadership to revitalize, refine, and strengthen core amphibious competencies, which are critical to maritime power projection and are a cost-effective option for a wide range of military operations.

### Flexibility & Utility of Amphibious Forces

History has shown that the capabilities that allow the amphibious force to conduct a forced entry landing against an opposing military force are the same capabilities that make it the force of choice for crisis response and building coalition partnerships.

### Crawl/Walk/Run Approach

Several planning and Academic events in 2009 and 2010 culminated in BOLD ALLIGATOR 11, a simulated ESG-MEB sized event conducted in December of 2010. Lessons learned from BA11 drove the scenario and milestones for BA12.

### Annual Exercise Commitment

USFMC and MARFORCOM have agreed to conduct an exercise each year, alternating between synthetic and live in order to concentrate on the more complex issues, refresh the practical and mechanical aspects of planning & conducting amphibious operations as well as refine what we learn and develop from these invaluable experiences.

# BOLD ALLIGATOR 2012

## Overview

### Revitalization of Amphibious Skillsets

Exercise BOLD ALLIGATOR 12 represents the Navy and Marine Corps revitalization of the fundamentals of amphibious operations, strengthening our traditional roles as “warfighters from the sea.”

### Exercise Objectives

Exercise Objectives are a continuation & progression of Exercise BOLD ALLIGATOR 11, which was a synthetic exercise conducted in December 2011. BOLD ALLIGATOR 12 will be a live and synthetic scenario-driven simulation supported exercise designed to train Expeditionary Strike Group TWO (ESG-2) and 2D MEB staffs to plan, coordinate and execute a MEB-sized amphibious assault from a seabase in a medium land and maritime threat environment to improve naval amphibious core competency. **Highlight:** It will be the first ever blended “Live/Synthetic” exercise of this magnitude and scale; allowing a dual focus on both units and staffs.

### Specific Training Objectives include:

Enhance the relationships/partnerships between the Atlantic Fleet & II MEF.

- Execute Command & Control (C2) of all forces ISO amphibious operations from the sea base & phase aspects of C2 ashore.
- Refine the supported/supporting relationships & doctrine for ESG-MEB operations.
- Integrate a Carrier Strike Group (CSG) in support of ESG-MEB amphibious operations.
- Integrate technological, platform & unit experimentation to enhance future capability.
- Engage organizations across the Navy & Marine Corps to develop enterprise solutions facing large-scale amphibious operations.

### Complex Scenario

The scenario for BOLD ALLIGATOR 12 will present complex afloat and ashore problem sets for the Navy/Marine Corps team based upon potential near-term challenges. BOLD ALLIGATOR 12 takes place in the “Treasure Coast” scenario which is used by Commander Strike Force Training Atlantic for East Coast training events. It replicates various geopolitical/military scenarios in the USCENTCOM and USPACOM AORs in an unclassified forum. Scenario development includes training requirements for forces in the midst of their Fleet Response Training Program (FRTP)/Pre-Deployment Training Program (PTP) to ensure they complete training to meet scheduled follow-on deployments. This integrated scenario is used for unit exercises leading up to BOLD ALLIGATOR 12 including the ARG/MEU C2X, and CSG FST, C2X. It allows a larger force list with minimum impact on CERTEX/JTFEX requirements; easier immersion in the scenario for those same units, improves interactions between the exercise force and the regional actors. A great benefit to using the same scenario across multiple training events and certifications is that we save money, time, wear and tear on our vital resources.

### Focus areas include:

- C2 relationships throughout all phases of amphibious operations
- Load planning & force embarkation
- Force employment
- Combined Blue/Green CFMCC staff

- Examination of current C5I capabilities
- Strategic level engagement
- Naval staff integration

### **BOLD ALLIGATOR 11 compared to BOLD ALLIGATOR 12**

Whereas BOLD ALLIGATOR 11 was executed in a low threat environment; BOLD ALLIGATOR 12 will have mine and anti-ship threat, requiring significant shaping operations (MCM, CSG, SOF). One concept that needs to be more carefully defined is the use of the MAGTF in contribution to the fight. ESG-2/2d MEB plan on using a Big Deck Amphib to serve as a “Harrier Carrier.” This may provide an excellent platform to support USN operations against threats. We’ll be looking for other MAGTF applications as well.

### **Exercise Participants**

Over 14,000 Marines, Sailors, Airmen and Soldiers with more than 25 live ships will be participating in the exercise. Coalition countries are also major contributors to the exercise with 8 partner countries providing a mix of personnel, ships, and equipment. The coalition involvement as well as Carrier Strike Group integration into the exercise increases the complexity and the realism of the event.

A blended Blue-Green CFMCC staff will provide a broad span of control and allow for a critical review of seabasing from a Naval perspective.

Naval Expeditionary Forces will play an important role during the exercise with Riverine units, Intelligence Exploitation Teams, Maritime/Civil Affairs units, EOD, Port Security units and Sea Bees.

BOLD ALLIGATOR 12 will also integrate Military Sealift Command (MSC) ship capabilities, to simulate sustainment and reinforcement of the 2d MEB Assault Echelon (AE). The use of a T-AK ship (Marine Corps Container & RO/RO) with an amphibious bulk liquid transfer system (ABLTS) will force “under the horizon” actions that will stress DDG/CG capacity and help refine support relationship considerations. Additionally, the use of

T-AVB ship (Aviation Logistics Support) will provide intermediate level maintenance capability to the 2d MEB Aviation Combat Element (ACE) and enhance their operational flexibility.

### **Summary**

A key point is ADM Harvey’s emphasis on large-scale amphibious operations as “fleet operations” that will require the full spectrum of USN capabilities. A MEB sized amphibious operation differs from a MEU sized operation in more than just scale, it is a much more complex issue involving many entities. We (USN/USMC Team) will take a close look at Command Relationships and the supported/supporting roles across a broad spectrum of critical capabilities.

USFFC and MARFORCOM are committed to continuing the BA series to ensure Navy and Marine Corps capability to conduct MEB-level amphibious operations from the sea to support national security objectives and to demonstrate amphibious capability extant in the Navy and Marine Corps today.

# BOLD ALLIGATOR 12

## Data Sheet

### USFFC & MarForCom Key Messages:

- BA 12 represents the Navy & Marine Corps' revitalization of the full range of amphibious operations.
- BA 12 will focus on today's fight with today's forces.
- BA 12 will showcase the advantages of seabasing.

**BA 12 Mission:** Plan & execute a MEB-sized amphibious assault from a seabase in a medium threat environment.

**BA 12 Intent:** Execute a multi-national, joint, live & synthetic scenario-driven exercise using East Coast operating areas to showcase USN/USMC amphibious operations as the nation's most viable offshore option.

### Key BA 12 Training Objectives:

- Enhance the relationships/partnerships between the Atlantic Fleet & II MEF.
- Execute Command & Control (C2) of all forces ISO amphibious operations from the sea base & phase aspects of C2 ashore.
- Refine the supported/supporting relationships & doctrine for ESG-MEB operations.
- Operate in a threat environment & define Commander Landing Force (CLF) role in countering threat.
- Integrate a Carrier Strike Group (CSG) in support of ESG-MEB amphibious operations.
- Integrate technological, platform & unit experimentation to enhance future capability.
- Engage organizations across the Navy & Marine Corps to develop enterprise solutions facing large-scale amphibious operations.

**Key BA 12 LIVEX Dates:** 30 Jan-13 Feb 2012.

**Total Live Forces Scheduled to Participate ISO BA 12:** Approx 14,350 US/Coalition personnel & 24 US/Coalition ships.

### Key Participants Include:

- CFMCC (Blue/Green staff comprised of Sailors & Marines from USFFC & MarForCom)
- CATF (ESG-2 w/ 7 live US amphib ships / 3 live CruDes escorts / 1 live French amphib ship / NEF / NBG / TACGRU)
- CLF (2d MEB w/ RLT 2 / MAG 29 / CLR 25 / 24th MEU / NCB / UK Royal Marines / Netherland Marines / Canadian Army)
- CSG (CSG-12 w/ 1 live CVN / 4 live CruDes escorts)

- Logistics Task Force (5 live MSC ships consisting of 2 T-AOs / 1 T-AK / 1 T-AKE / 1 T-AVB)
- Mine Warfare Task Force (Air & Naval MCM assets / 2 live Canadian MCM ships / 1 live USCG Cutter)

**Coalition Countries Participating:** Canada / United Kingdom / France / Netherlands / Spain / Italy / New Zealand / Australia

**USFFC Guidance:** An ESG-MEB landing is a Fleet operation that requires the full range of Fleet capabilities. Sea control and air superiority are absolutely critical to successfully carry out an amphibious landing in a hostile environment.

## Adm Harvey's Amphibious and Expeditionary Operations Reading Program

Bold Alligator 2012 (BA12) is a large-scale operation designed to exercise the Navy-Marine Corps' ability to conduct prompt and sustained amphibious expeditionary operations from the sea, a fundamental core competency for us, that has not occurred in the last ten years because of our focus on operations in Iraq and Afghanistan. It is imperative that we not lose sight of the importance of this core competency nor the fact that this competency is and always will be a unique capability delivered by the Navy/Marine Corps team.

To that end, I have directed that exercise Bold Alligator serve as our primary operational organizing principle for this year to culminate in BA12, which will be the largest amphibious exercise conducted by the fleet in the last ten years. The purpose of this exercise is to revisit Navy/Marine Corps amphibious expeditionary tactics, techniques, and procedures and reinvigorate our culture of conducting combined Navy/Marine Corps operations from the sea. I want to emphasize that BA 12 will be a major fleet exercise, not simply another ARG/MEU event.

As we begin planning for BA 12, it is apparent to me that our collective knowledge, which certainly includes my knowledge, of amphibious expeditionary operations has eroded over time. To ensure I am fully ready for BA 12, I have established a personal reading program that I encourage you to take advantage of as well for your own benefit and that of your unit. This reading list is voluntary, and will not be made mandatory, but I truly believe it can form the basis of a strong professional reading program, regardless of the level of your participation in BA 12. My reading program contains four books that can be read within a year with additional recommended readings focused on specific areas of amphibious operations, to include doctrine and tactics.

### Core list:

#### Current doctrine and amphibious operations in a modern environment

- Joint Publication 3-02 (JP 3-02) Amphibious Operations (10 Aug 2009) JP 3-02 is the current doctrine for amphibious operations. This doctrine provides the frame of reference for reading subsequent books on amphibious operations and their history. Readers should consider the following:
  - Ask yourself how your unit, command or specialty fits into the framework of an amphibious operation. For example, what are the implications for maritime intelligence requirements? How would an amphibious task force tie into a carrier strike group and execute composite warfare?
  - Read with an eye towards how this doctrine fits in with overall JFMCC/Fleet doctrine as contained in JP 3-32 command and control for joint maritime operations and NWP 3-32 Maritime Operations at the Operational Level of War.
  - The 1982 Falklands conflict between the UK and Argentina featured an amphibious operation carried out by a modern maritime force under a significant threat from conventional air-delivered ordnance without air superiority in the AOA. While technology has advanced since 1982, many of the warfighting issues we face today are similar in nature to what the UK forces faced while projecting forces ashore at the end of a long and complex logistical pipeline in a hostile environment. Below are memoirs by the three critical UK maritime commanders in this conflict - read these three books and compare the perspectives and lessons learned from each. Additionally, read with an eye towards how a U.S. maritime force would organize and operate against an updated threat that was as relatively dangerous to our force as the Argentineans were to the British in 1982.
    - Woodward, Sandy. One Hundred Days: The Memoirs of the Falklands Battle Group Commander.
    - Clapp, Michael, and Southby-Taylor, Ewen. Amphibious Assault Falklands: The Battle of San Carlos Water
    - Thompson, Julian. No Picnic: 3 Commando Brigade in the Falklands.

#### Secondary selections:

- The following groups of books will broaden readers understanding of specific amphibious operations areas.
- Diverse amphibious doctrine and operations: WWII actually saw the development of three general models for U.S. amphibious operations: the U.S. Marines and Navy in the central Pacific; the U.S. Army and Navy in the southwest Pacific; and the Allied coalition in Europe. Our current doctrine derives mainly from the USMC-USN campaigns in the central Pacific. However, the U.S. Army conducted more amphibious operations in WWII than did the Marines. Together with the Navy, the Army developed approaches and techniques in their theaters that are not captured in current doctrine, but are certainly worth reviewing closely and considering, in updated form, their applicability today. The following books provide a good background of these unique approaches to amphibious operations:
  - Isely, Jeter a., and Philip A. Crowl. The U.S. Marines and Amphibious War: Its Theory, and its Practice in the Pacific.
  - Yung, Christopher D. Gators of Neptune: Naval Amphibious Planning for the Normandy Invasion.
  - Barbey, Daniel E., Vice Admiral USN (Ret). Macarthur's Amphibious Navy: Seventh Amphibious Force Operations, 1943-1945.

- The following two books provide basic level descriptions of amphibious tactics in the different theaters in WWII:
  - Rottman, Gordon L. U.S. World War II Amphibious Tactics: Mediterranean & European Theaters.
  - Rottman, Gordon L. U.S. World War II Amphibious Tactics: Army & Marine Corps, Pacific Theater.
- Analyzing amphibious operations: The following books provide different perspectives on amphibious operations, using broad sets of case studies to derive their conclusions:
  - Evans, Michael. Amphibious Operations: The Projection of Sea Power Ashore.
  - Gatchel, Theodore L. At The Water's Edge: Defending Against the Modern Amphibious Assault.
  - Gatchel, Theodore L. Eagles and Alligators; An Examination of the Command Relationships That Have Existed Between Aircraft Carrier and Amphibious Forces During Amphibious Operations (Naval War College Strategic Research Department Research Memorandum 1-97).
- Overview histories. The following books provide broad Histories of amphibious operations and amphibious doctrinal Development:
  - Messina, Barry P. Development of U.S. Joint and Amphibious Doctrine, 1898-1945. (Center for Naval Analyses, Sept1994).
  - Bartlett, Merrill L. Assault from the Sea: Essays on the History of Amphibious Warfare.
  - Alexander, Joseph H., and Merrill L. Bartlett. Sea Soldiers in the Cold War: Amphibious Warfare, 1945-1991.

Understanding amphibious operations history, doctrine, and tactics is important to all of us - not just to those serving in amphibious ships or those in the surface force. Effectively executing amphibious operations involves our entire Navy and Marine Corps team. Over the coming year, I encourage you to read, to think about what you read and then to apply what you've learned to the task at hand as we prepare for and execute BA 12.

Admiral J. C. Harvey Jr.,  
Commander, U.S. Fleet Forces Command

## LtGen Hejlik's Revitalizing Amphibious Warfare Proficiency Professional Military Education (PME)

As America's expeditionary force in readiness, our amphibious capability is paramount to providing the flexible crisis response options necessary to face the challenges of today's world. Our amphibious force is scalable, adaptable and self sustaining. We cannot accomplish the mission without the integral support from our Navy partners. This close link between the Marines and the Navy is the backbone of successful amphibious operations and a focus for leadership from both services. As a result of the recently concluded Navy---Marine Corps warfighter talks, naval leadership renewed our commitment to strengthen this bond from the water-front to the service headquarters.

A critical core competency unique to the Marine Corps---Navy team is the capability to project and sustain a tailored force from a seabase. This vital component of our national power can only be achieved through the coordinated and integrated efforts of our naval forces. Due to sustained combat operations in Iraq and Afghanistan, MFC has not conducted a live MEB level amphibious exercise on the east coast in the last ten years.

In order to revitalize our excellence in the core competencies of large scale amphibious operations, we have executed the first of the Bold Alligator series of exercises with a fleet synthetic training(FST) event in the fall of 2010. In 2012 we will conduct a MEB level live exercise, Bold Alligator 2012 (BA12). BA12, the capstone event in this initial series of exercises, serves as the foundation of a renewed focus on the Marine Corps' amphibious warfare core competency. BA12 will integrate MEB and Expeditionary Strike Group (ESG) led amphibious forces with a Carrier Strike Group (CSG) in a complex, realistic modern threat scenario. During BA12, we will revisit our doctrine involving seabasing, forcible entry operations and planning, and command---and---control while examining current tactics, techniques, and procedures. Going forward, the continuing series of Bold Alligator exercises enables us to further strengthen our amphibious core proficiency, refine our naval doctrine, and hone warfighting skills.

We must reacquaint ourselves with the foundation and history of amphibious operations in order to better prepare as a fighting force. To this end I am recommending a series of unit level training events on core amphibious doctrine and other amphibious related literature starting with a refresher on Joint Publication 3---02 (JP 3---02), Amphibious Operations (10 aug 09). During this training each member and unit should ask themselves how they contribute to our amphibious capability, how they might improve this unique warfighting skill, and their role in connection with our Navy partners to whom we are inextricably linked. Most recently the modern day experiences of the royal Navy and Marines during the Falklands conflict hold valuable lessons on executing opposed amphibious operations over extended distances. Paragraph 5 contains a list of sources from which to formulate unit level training.

In an effort to refocus upon our amphibious roots, the following references are provided. Units and individuals are encouraged to use them in their preparation.

Amphibious highlights from the commandant's reading list:

- Sherrod. Tarawa: The Story of a Battle.
- Hastings & Jenkins. The Battle for the Falklands.
- Heinl. Victory at High Tide: The Inchon---Seoul Campaign.
- Isely & Crowl. The U.S. Marines And Amphibious War: Its Theory And Its Practice In the Pacific.
- Moorehead. Gallipoli.
- Frank. Guadalcanal: The Definitive Account of the Landmark Battle.
- Woodward. One Hundred Days: The Memoirs of the Falklands Battle Group Commander.

Highlighted readings identified by our Navy partners:

- Clapp & Southby---Taylour. Amphibious Assault Falklands: The Battle of San Carlos Water.
- Thompson. No Picnic: 3 Commando Brigade in the Falklands.
- Yung. Gators of Neptune: Naval Amphibious Planning for the Normandy Invasion.
- Barbey. McArthur's Amphibious Navy: Seventh Amphibious Force Operations, 1943---1945.
- Rottman. U.S. World War II Amphibious Tactics: Army & Marine Corps, Pacific Theater.

Execution of BA12 is less than a year away and both the Navy and Marine Corps are committed to making this initial live exercise of the Bold Alligator series a success. Planning is ongoing and will continue up to execution to ensure we get this right. The success of BA12 depends in large part on the knowledge that each participant brings to the planning and execution. I challenge every member of the force to reeducate themselves in our amphibious core competencies. I look forward to working with the operating forces of Bold Alligator as we revitalize the fundamental role of the Marine Corps and Navy team as "Fighters from the Sea".

LtGen Hejlik sends.

## USFF & MarForCom BLOGs ISO BOLD ALLIGATOR 2012

09 June 2011

### BOLD ALLIGATOR 2012 UPDATE

Team,

After Bold Alligator 2011 - last year's successful large scale, synthetic amphibious training exercise – we incorporated the lessons learned and quickly began planning for Bold Alligator 2012 (BA12).

BA12, tentatively scheduled for early in 2012, will be the largest amphibious exercise conducted by the Navy and Marine Corps in the last ten years. While planning is ongoing, it currently includes:

- An Amphibious Task Force (ESG-2) consisting of two Amphibious Ready Groups (ARGs—7-8 ships) and a Naval Beach Group (NBG)

- A Marine Expeditionary Brigade-sized Landing Force (2d MEB) consisting of a complete Marine Expeditionary Unit (MEU), a Regimental Landing Team (RLT), a Marine Air Group (MAG) and a Combat Logistics Regiment (CLR)

- A Carrier Strike Group (CSG-aircraft carrier, carrier air wing, 3-4 surface combatants)

- Military Sealift Command (MSC) ships

- Mine Counter-Measures (MCM) forces

- Navy Expeditionary Combat Command (NECC) forces

- Joint supporting forces

- Coalition amphibious, landing, and MCM forces

As the list of participants indicates, an amphibious mission of this size is not simply the purview of the amphibious forces and the Marines—it is a joint, multi-national, and naval endeavor requiring the full attention of the Fleet and Marine components at both the operational and tactical levels of war. Projecting power from the sea is a **NAVAL** core competency. Integrated forces conduct of operations from the blue water, into the seaward side of the littoral, and ultimately to the depth of objectives ashore.

There has been a great deal of recent commentary on whether we have seen the end of large-scale amphibious operations. However, this was exactly the state of affairs before the Korean War in 1950, before the Falklands conflict of 1982 and before the Iraqi invasion of Kuwait in 1990. Each of these crises required planning for and, in two cases, executing large scale amphibious assaults. Especially in this volatile era, we cannot know with certainty that we will not have to gain access to an operational area to project and sustain a sizable landing force ashore. The adversary will probably not be a conventional military, but state or non-state entities with competent anti-access and area denial —“hybrid” capabilities—that can disrupt our operations at sea, in the air, and on land. The Navy and Marine Corps have the legislated responsibilities to be able to conduct these operations.

At its core, BA12 is a training exercise to ensure that the units presently assigned to USFF and Marine Corps Forces Command have the capability to plan and execute these operations—how we do this with the forces we have today.

In June 1944, allied forces carried out two large amphibious operations on opposite sides of the globe. The Overlord invasion of France, and the Forager operation to seize the Marianas were similar in many respects. The building blocks of aircraft, ships, and ground forces were all generally the same. But these two operations were also significantly different in operational and tactical organizations and approaches. These differences were shaped by the unique environment of each operation. Our future amphibious operations will likewise have to adapt our basic tactical elements to operate in new and innovative ways.

In this spirit, BA12 is also an experiment. It is not an experiment in the sense of testing new technologies or equipment, but in the broadest sense of the term. Harkening back to the Fleet Battle Experiments before World War II, where the Navy and Marines developed the tactics and techniques that carried our forces across oceans and onto foreign shores, BA12 will provide an opportunity to combine our current capabilities in new ways to address the challenges we face. Revitalizing our amphibious competencies does not mean conducting the operation as we did in 1942, 1950, 1990, or even 2000, but how we would do it now, with the current joint and naval operating concepts.

All the best, JCHjr.

Posted by ADM J.C. Harvey, Jr USN 

14 September 2011

## BOLD ALLIGATOR 2012 UPDATE

Team,

We are making good progress in our planning and preparations for Bold Alligator 2012 (BA12) and are on track for execution in Jan-Feb 2012. As I described in **my last update**, BA12 is an exercise focused on our Navy-Marine amphibious mission, but is not limited to only our amphibious forces – an ESG-MEB landing is a Fleet operation that requires the full range of Fleet capabilities. Sea control and air superiority are absolutely critical to successfully carry out an amphibious landing in a hostile environment.

History has shown us time and again that these conditions must not only be attained in the littorals, but they must be maintained throughout the entire engagement. And while we would like to execute an amphibious landing as a sequential evolution – setting and maintaining conditions, followed by the ship-to-shore maneuver – we cannot count on our ability or the pace of operations to allow us to execute such an optimal plan – being able to rapidly and effectively respond to the operational situation is critical. Our adversaries today (including non-state actors) are capable of employing a range of hybrid (low and high tech) tactics to disrupt our missions and threaten our forces afloat. For this reason, we must be ready and stay ready to fight at sea as we are conducting the ship-to-objective movement.

In this vein, the participation of a full Carrier Strike Group (CSG) in this exercise, as well as other Navy strike, air superiority, and sea control capabilities, is vital to fully train the force to perform this large-scale, complex and demanding mission. It is imperative that our Naval forces understand the requirements of both sides of the equation. Navy-Marine Amphibious forces must understand how the CSG and other elements of the Fleet operate and accomplish their mission. Conversely, our non-Gator communities must understand how the amphibious task force and landing force plan and execute their operations, what support they require, and when they require it.

For those of you who have been working through the **BA12 reading list** I transmitted to the Fleet earlier this year, you've read about some of the common challenges we have faced when executing an amphibious operation. In fact, some of the most controversial tactical wartime decisions have historically surrounded the relationships between the Sea Control forces (primarily Aircraft Carrier Task Forces) and the Amphibious Force.

- Fletcher, Turner, and Vandegrift at Guadalcanal Aug 1942
- Spruance and Mitscher at the Marianas (Philippine Sea) Jun 1944
- Halsey, MacArthur and Kinkaid at Leyte Gulf Oct 1944

These examples are just a few of the more prominent cases from our history that generate heated debate about the proper relationships and roles of Sea Control (Aircraft Carrier) and Power Projection (amphibious) forces when the situation drives choices between the two in terms of risk and mission priority.

More recently, the coordination problems between the three UK Task Force commanders in the 1982 Falklands conflict, the Carrier TF, the Amphibious TF and the Landing Force, reflect many of the same issues.

The Falklands conflict is well covered in the three —Core List” readings from my reading list; however, I also want to bring your attention to two other items from the list, both written by Col. Theodore Gatchel USMC (ret) a former instructor at the Naval War College. The first is his book, **At the Water's Edge; Defending against the Modern Amphibious Assault** (USNI Press, 1996). In describing the difficulties of defending against amphibious assault in the 20th century, Gatchel makes it clear that successful defenses began at sea. He also highlights that amphibious operations have and can be conducted while a threat still exists at sea. We just need to be prepared for it.

Gatchel's other entry I want to highlight is **Eagles and Alligators; An Examination of the Command Relationships That Have Existed Between Aircraft Carrier and Amphibious Forces During Amphibious Operations** (Naval War College, 1997). In a brief, yet comprehensive monograph, Gatchel provides all the "models" of how naval forces were organized to conduct amphibious operations, along with the examples and pros and cons of each approach. He poses five basic questions that we should consider as we organize the fleet for these operations:

- What is the lowest level of command at which a single individual has control of all the forces required to accomplish the mission?
- Is the accomplishment of the immediate amphibious mission the primary concern of the individual who controls all the assets need to accomplish the mission?
- Is the commander responsible for the overall mission located where he can monitor the progress of the operation, first hand, and personally influence the outcome of the battle if necessary?
- Does the Commander responsible for the overall mission have a staff capable of dealing with the complexities of both carrier operations and amphibious warfare?
- Does the air control system in use allow carrier aircraft to support the landing adequately?

As I mentioned at the beginning of this post – an ESG-MEB landing is a Fleet operation that requires the full range of Fleet capabilities. I believe that everyone at Fleet Forces (HQ staff and subordinate commands), regardless of whether or not you are directly involved in the exercise, can benefit from taking the time to read one or more selections from the reading list. With the exercise just a few short months away, there is no better time than right now to be studying hard and applying what you know.

All the best, JCHjr

Posted by ADM J.C. Harvey, Jr USN 

14 November 2011

## BOLD ALLIGATOR 12 UPDATE

Bold Alligator 2012 (BA12), scheduled for Jan. 30 through Feb. 12, 2012, will be the largest amphibious exercise conducted by the Navy and Marine Corps in at least the last ten years.

The over-riding intent of this large-scale effort is to revitalize Navy & Marine Corps amphibious tactics, technique and procedures and reinvigorate its culture of conducting combined operations from the sea at the the Marine Expeditionary Brigade(MEB)/ Expeditionary Strike Group (ESG)-level.

That's not to diminish the fact that we continually train and deploy Marine Expeditionary Units aboard Amphibious Ready Groups. Indeed, despite the fact that large numbers of Marines have been committed to the fight in Iraq and Afghanistan over the last decade, our Navy-Marine team has been regularly conducting amphibious operations around the world. From providing aid to flood-ravaged Pakistan, to strike operations and a successful TRAP in Libya, ARG-MEUs continue to operate from the sea, across the range of military operations, all over the world.

So why has there been so much recent commentary about the viability of large-scale amphibious operations? I sense that it's because when many speak of *amphibious operations*, they think of "storming the beach" like Marines did at Iwo Jima. And, while landing on an island against a heavily-entrenched force of 22,000 is certainly an amphibious operation — it's very much at the high end of the spectrum, and represents something less than 1/1000th of the cumulative amphibious operations U.S. Naval forces have conducted over the past century.

Of course, because of the iconic images from World War II, and the U.S. Navy and Marine Corps' cultural connection to that war's battles in the Central Pacific, discussion of amphibious operations always conjure images of Saipan, Peleliu, Tarawa ... all brutal battles where we lost thousands of Marines, Sailors and Coast Guardsmen. While we don't want to imagine our Nation ever being thrust into such a position again, this context should not be used as the exclusive framework in which to discuss the need for amphibious forces capable of forcible entry.

In today's world, the Navy-Marine Corps team must remain capable of gaining access to an operational area and projecting and sustaining a sizable landing force ashore. We have the legislated responsibilities to be able to conduct these operations, and we certainly must be ready to do so beyond the ARG-MEU level where we routinely operate today.

At its core, BA12 is a training exercise to ensure that the units presently assigned to U.S. Fleet Forces Command and Marine Corps Forces Command have the capability to plan and execute these operations — how we do this with the forces we have today. As Commander, U.S. Fleet Forces, ADM Harvey has observed, "Revitalizing our amphibious competencies does not mean conducting the operation as we did in 1942, 1950, 1990, or even 2000, but how we should do it now ..."

With that in mind, I commend to you the reading identified here. Use it as a resource to build your understanding of amphibious operations history, doctrine, and tactics — then grow it. This is what we are about, and what our Nation needs us to be.

Posted by LtGen Hejlik

2 December 2011

## AMPHIBIOUS SHIPBUILDING

On Monday (28 November 2011) AOL Defense published an article discussing a recently published Congressional Budget Office (CBO) report on Amphibious support to the Marine Corps. At the heart of the piece were these numbers from the Navy's shipbuilding plan:

The Navy will hit its goal of 33 amphibious ships under the plan but will not reach the 38-ship fleet the Marines want, according to the report by CBO naval expert Eric Labs. The Navy plan goes like this: it will buy 20 new amphibs over the next 30 years beginning in fiscal year 2012. CBO analysts estimate it will cost the Navy roughly \$50 billion to buy those ships. During the same period, the Navy will retire 22 older amphibs from the fleet. CBO estimates the Navy won't be able to hit 33 amphibious ships until 2016. Once they do, the service will be able to maintain those levels until 2032. That is when the scheduled ship retirements start outpacing the number of new amphibs entering the service. That leaves the Navy with a 33-ship amphib fleet for about 16 years. —A no point . . . would the force reach the Marine Corps' objective of 38 amphibious ships," Labs writes.

While all of that's correct, what concerns me is the next statement:

— . . . the Navy believes their service brethren may be overstating their need for more amphibs."

It appears here that the writer is reading this as a Marine Corps v. Navy issue, when in fact the requirement for amphibious ships is a *Naval* issue – a problem that the Navy and Marine Corps face as a team. *Together*, we've agreed that 38 amphibious ships is our requirement, but have also accepted that in light of fiscal constraints the Navy will sustain a lesser total of 33 ships in the assault echelon – something Dr. Labs actually discussed in detail at the Fletcher Conference last Spring.

Moreover, the language in the next paragraph makes it sound as if the Marines are making up things for amphibs to do. But the reality is quite the opposite; it is the combatant commanders (CCDR) that are driving the demand, and that demand is dramatically outstripping U.S. naval capacity across the board. Here's an excellent example courtesy of Information Dissemination:

On Sunday, January 8th the USS Bataan (LHD 5) deployment will be 291 days (41 weeks and 4 days) old. On that day the USS Bataan (LHD 5) will pass the USS Abraham Lincoln (CVN 72) as the longest big deck deployment since the Vietnam War (290 days in 2003). . . . The USS Bataan (LHD 5) deployment went early in response to Libya, which we downplayed politically as only a minor military operation, and is staying late because of a legitimate lack of amphibious ships to cover rotation requirements for ARGs. If you recall, the extended deployment of Bataan ARG was announced early by the Navy who because of Libya, was forced to keep the USS Kearsarge (LHD 3) ARG late from August 27, 2010 through May 16, 2011 – a nearly 9 month deployment.

As this single example illustrates, the need for amphibs is real. And it's worth noting there is no truth in the absurd notion that the Marine Corps needs to make work for itself. In the case of every deployed ARG/MEU team – including those listed above or others (such as this, this, or this) – our national leadership has directed combatant commanders to respond, and they have called on naval forces to do so.

While the amphib inventory may drop below 33 until 2016, the Navy *is* building 20 amphibians – and that’s a significant investment for a U.S. Navy that has a lot of other demands placed on it.

The real takeaway, however, is that the Navy and Marine Corps – America’s naval force – share the common view that investment in naval forces to meet CCDR demands not only serves our current national interests, it also stands to mitigate substantial risk in the future security environment.

Posted by LtGen Hejlik



# The Importance of the World's Oceans...and Man's Transition to Amphibious Forces



Man's desire to reap the bounty of the sea, and to trade with his neighbors, resulted in a connection to the oceans that keeps large populations near the world's coastlines. Large, fertile river deltas that serve as agricultural centers and natural highways to the interior also make the world's littoral regions population "magnets." International commerce, national defense, and access to the bountiful, though limited, natural resources that exist in, and under, the world's oceans have fueled tremendous improvements in maritime capabilities ranging from ship design to port facilities the world over.

Access to the world's littoral regions, for trade, defense, and environmental management is an imperative for any maritime nation.



*95% of the world's commerce moves by sea...*





# “Over a Thousand”



*Over one thousand applications of US amphibious capability in the past 20 years,  
Covering the range of activities described in the National Security Strategy.*



# The Tradition of Naval Expeditionary Operations

Since the American Revolution, the Navy-Marine Corps team has engaged in every conflict.

In the last twenty years alone, the Navy-Marine Corps team has applied its amphibious capabilities in over 100 crises while also conducting over 900 cooperative engagement events in support of our national security interests.

Though the thought of amphibious operations may conjure images of Iwo Jima or Inchon, it actually represents a wide variety of missions covering the spectrum in the range of military operations. From peaceful humanitarian assistance to full blown major combat operations, employment from the sea has afforded US flexibility, freedom of maneuver, power projection and security in ways that fixed land forces cannot deliver.



... FROM THE PAST, THROUGH THE PRESENT AND INTO THE FUTURE



**“...At the Geo-Strategic level, it’s all about the littorals.”**

**Future Security Environment ... Numbers are Telling**

95% of international communications travels via underwater cables

95% of the world’s commerce moves by sea

53% of the U.S. population lives within 12 miles of the sea

17 of the world’s largest cities have direct access to the sea



75% of the population lives within 200 miles of a coast

49% of the world’s oil travels through 6 major sea chokepoints

23,000 ships are underway daily

25% of the world’s oil & gas is drilled at sea

95% of all commercial cargo travels through the littorals

70% of world is water



# Assured Access benefits more than just our Nation's security

## Global Access Benefits:

- Enables support to friends, allies, partners
- Facilitates economic opportunity
- Supports environmental protection initiatives

## Versatile, always ready naval forces are:

- Flexible, sea-based, "floating military bases," no SOFAs required!
- Energy efficient, self-contained, "whole of government" oriented
- As capable for disaster response as they are for force projection
- Cost effective

*Amphibious, Expeditionary Forces Are The Key!*





# Combatant Commander Demand Signal For Amphibious Forces



Our National Security Strategy places a premium on diplomatic, economic, and military engagement with international partners to prevent, protect against, and respond to threats and natural disasters.

In an era of increased sensitivity to U.S. forces overseas, a sea-based approach provides a discrete, flexible and effective means of selectively engaging to build partnerships and respond to crisis and project our national interests.

This document highlights the past twenty years of U.S. amphibious capability being applied across the range of military operations.

The utility of amphibious capability in today's environment is shown in the adjacent graphic, highlighting the increase in amphibious demand while the nations capacity to source that demand is decreasing

Combatant Commander Amphibious Ship Demand and Amount Sourced



*"Demand", as indicated in the graph above, is determined by official regional combatant command force requests that are registered in the Global Force Management Process.*

## Gen Amos (CMC) Role of United States Marine Corps

As we explore ways to adjust to a new period of fiscal austerity, there emerges a clear imperative that our Nation retain a credible means of mitigating risk while we draw down the capabilities and capacities of our forces.

Our Nation faces an uncertain future; we cannot predict where and when events may occur that might call us to respond to protect our citizens and our interests. There have always been times when events have compelled the United States to become involved, even when such involvement wasn't desired; there is little doubt that we will have to do this again in the future. Complicating matters is the fact that since the 1990s, our nation has significantly reduced the number and size of our bases and stations around the world.

We are a maritime nation. Like so much of the world, we rely on the maritime commons for the exchange of commerce and ideas. Many depend on us to maintain freedom of movement on those commons; we continue to take that responsibility seriously. Your naval forces are the solution set to fulfilling our global maritime responsibilities.

Naval forces are not reliant on host nation support or permission; in the conduct of operations, they step lightly on our allies and host countries. With the increasing concentration of the world's population close to a coastline, the ability to operate simultaneously on the sea, ashore, and in the air, and to move seamlessly between these three domains represents the unique value of amphibious forces. Operating as a team, amphibious forces provide *operational reach* and *agility*, they "*buy time*" and *decision space* for our national leaders in time of crisis. They bolster diplomatic initiatives by means of their credible forward presence. Amphibious forces also provide the Nation with assured access for the joint force in a major contingency operation. Modern amphibious operations, like the TF-58 assault that seized Kandahar airport 450 miles inland in 2001 shortly after the 9/11 attacks, seek to avoid enemy strengths by exploiting gaps and weaknesses.

When the Nation pays the 'sticker price' for its Marines, it buys the ability to remain forward deployed and forward engaged to assure our partners, reinforce alliances, and build partner capacity. For 7.8% of the total DoD budget, our Nation gains the ability to respond to unexpected crises, from humanitarian disaster relief efforts, to non-combatant evacuation operations, to conduct counter-piracy operations, raids or strikes. That same force can quickly be reinforced to assure access anywhere in the world in the event of a major contingency; it can be dialed up or down like a rheostat to be relevant across the range of military operations. No other force possesses the flexibility to provide these capabilities and *yet sustain itself logistically for significant periods of time*, at a time and place of its choosing.

"Expeditionary" is not a bumper sticker to us, or a concept, it is a "state of conditioning" that Marines work hard to maintain. Given its mission to be the expeditionary force in readiness, a tiered readiness concept is not compatible with the Marine Corps' missions because its non-deployed units are often called upon to respond to unanticipated and varied crises on a moment's notice.

The Marine Corps fills a unique lane in the capability range of America's armed forces. A *Middleweight Force*, we are lighter than the Army, and heavier than SOF. The Corps is not a second land army. The Army is purpose-built for land campaigns and carries a heavier punch when it arrives, whereas the Marine Corps is an expeditionary force focused on coming from the sea with integrated aviation and logistics capabilities. The Marine Corps maintains the ability to *contribute* to land campaigns by leveraging or rapidly aggregating its capabilities and capacities. Similarly, Marine Corps and SOF roles are complementary, rather than redundant. Special Operation Forces contribute to the counter-insurgency and counter-terrorism efforts of the Combatant Commanders in numerous and specialized ways, but they are not a substitute for conventional forces with a broader range of capability and sustainability.

The Marine Corps was specifically directed by the 82nd Congress as the force intended to be "the most ready when the Nation is least ready." This expectation exists because of the costly lessons our nation learned during the Korean War when a lack of preparedness in the beginning stages of the conflict very nearly resulted in defeat. Because our Nation cannot afford to hold the *entire* joint force at such a high state of readiness, it has chosen to keep the Marines ready, and has often used them to plug the gaps during international crises, to respond when no other options were available.

Anecdotally, the American people believe that when a crisis emerges - Marines will be present and will "invariably turn in a performance that is dramatically and decisively successful - not most of the time, but always." They possess a heart-felt belief that the Marine Corps is good for the young men and women of our country. In their view, the Marines are extraordinarily adept at converting "un-oriented youths into proud, self-reliant stable citizens - citizens into whose hands the nation's affairs may be safely entrusted." An investment in the Marine Corps continues to be an investment in the character of the young people of our country.

Finally, in an increasingly dangerous and uncertain world, we must continue to provide the protection our Nation needs and to preserve our ability to do what we must as the world's only credible remaining super power. As we face inevitable difficult resource decisions, I believe that we must also consider how we can best mitigate the inherent risk of a reduced defense capacity...like an affordable insurance policy, Marine Corps *and* the Navy's amphibious forces, represent a very efficient and effective hedge against the Nation's most likely risks

## The Marine Air-Ground Task Force

The Marine Air-Ground Task Force (MAGTF) describes the principal organization used by the Marine Corps for all missions across the Range of Military Operations (ROMO). MAGTF's are a balanced air-ground, combined arms task organization of Marine Corps forces under a single commander structured to accomplish a specific mission. MAGTFs are comprised of up to four elements – command element (CE), ground combat element (GCE), aviation combat element (ACE), and a logistics combat element (LCE). Their purposes are:

**Command Element** – The CE provides all headquarters functions for the MAGTF: command and control, operations, plans, and administration. It is specifically manned and trained to integrate all warfighting functions provided by the GCE, ACE, and LCE in a closely coordinated manner. The CE also includes unique capabilities not found in the subordinate units including intelligence and communications assets.

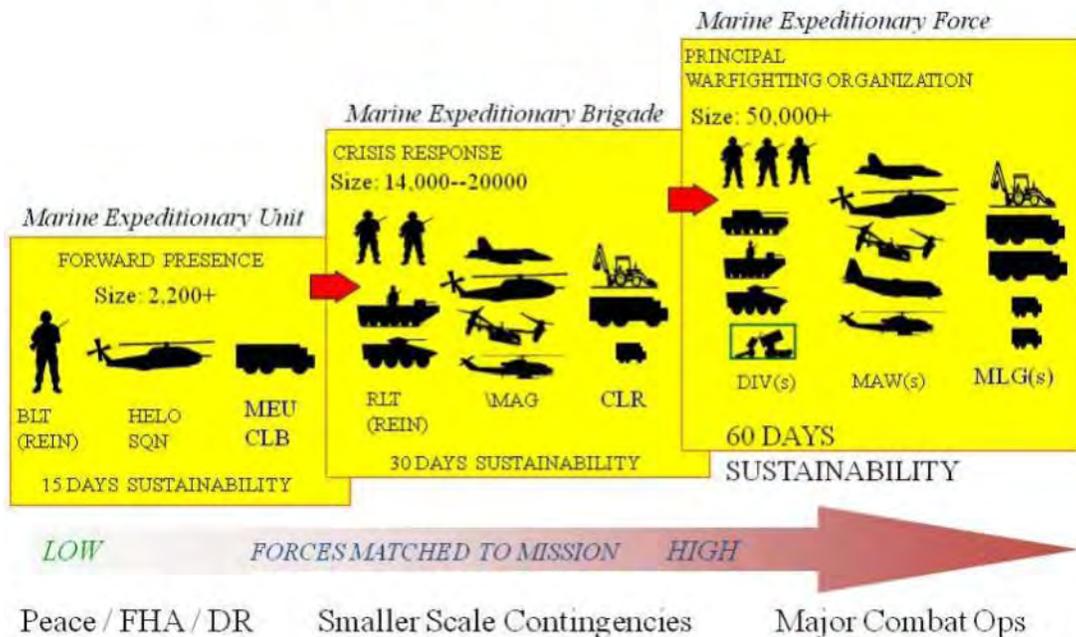
**Ground Combat Element** – The GCE's mission is to locate, close with and destroy the enemy with fire and maneuver and repel an enemy's assault with fire and close combat. It provides infantry, armor, artillery, reconnaissance, anti-tank and other combat arms. The GCE is typically formed by reinforcing an infantry unit with elements from other combat arms units.

**Aviation Combat Element** – The ACE contributes the air power to the MAGTF. It includes all aircraft (fixed wing, rotary-wing, tilt-rotor), their pilots and maintenance personnel, and those units necessary for aviation command and control. The ACE is typically a composite of various aircraft types organized into a single air unit with C2 and maintenance capabilities attached.

**Logistics Combat Element** – The LCE supports the MAGTF through the 6 functional areas in an expeditionary environment: supply, maintenance, transportation, general engineering, health services, and other services (legal, exchange, food, disbursing, postal, billeting, religious, mortuary, and morale/recreation services). The LCE is comprised of dedicated Logistics units assigned direct support of the adjacent elements or in general support of the MAGTF.

The MAGTF is task organized to meet mission requirements, so there is no specific equipment or manning list specifying its organization. However, MAGTFs are typically described using three terms: Marine Expeditionary Unit (MEU), Marine Expeditionary Brigade (MEB), and a Marine Expeditionary Force (MEF). A MAGTF's designation not only describes its size and equipment set, but where on the Range of Military Operations (ROMO) its mission set lies, as shown below:

## MAGTF Force Structures



## Composite Warfare Commanders (CWC) Construct Primer

### Warfare Commanders

#### Air Missile Defense Commander (AMDC) – Call Sign: Whiskey

- Defend a maritime force against attack by airborne weapons launched from aircraft, ships, submarines, and land-based sites

#### Antisubmarine Warfare Commander (ASWC) – Call Sign: X-Ray

- Defense of the force against submarine threats

#### Surface Warfare Commander (SUWC) – Call Sign: Sierra

- Defense of the force against surface threats

#### Sea Combat Commander (SCC) – Call Sign: Zulu

- An optional position which integrates ASW and SUW task under one commander

#### Strike Warfare Commander (STWC) – Call Sign: Papa

- Naval Operations to destroy or neutralize enemy targets ashore

#### Information Operations Warfare Commander (IWC) – Call Sign: Quebec

- Responsible to shape and assess the information environment; achieve and maintain information superiority; develop and execute IO plans in support of CWC objectives; and support other warfare commanders

### Functional Group Commanders

#### Ballistic Missile Defense Commander (BMDC) – Call Sign: Uniform

- Defense of the force from ballistic missile attack

#### Maritime Interception Operations Commander (MIOC) – Call Sign: Juliet

- Responsible for the force's MIO

#### Mine Warfare Commander (MIWC) – Call Sign: Golf

- Principal advisor to the OTC on matters pertaining to Mine Warfare, responsible for coordinating the laying of minefields in support of the OTC as well as supporting MCM forces, which are usually not under the direct command of the OTC

#### Screen Commander (SC) – Call Sign: November

- Serve to coordinate movement and position relative to each other. Typically, they provide protection to high value units with screen ships seeking to place themselves between the adversary and the high value unit

#### Underway Replenishment Group Commander (URG CDR)

- Coordinate logistic evolutions

### Coordinators

#### Airspace Control Authority (ACA)

- The ACA develops policies and procedures for airspace control and for the coordination required among units within the OA. Airspace control includes coordination, integration, and regulation of airspace for the purposes of increasing operational effectiveness

#### Air Resource Element Coordinator (AREC) – Call Sign: Romeo

- Allocates and apports sea-based, fixed-wing air assets and CVN-based helicopters for the CWC

#### Common Tactical Picture Manager (CTPM)

- Responsible for establishing, maintaining, assuring quality of, and disseminating the fused all-source GENSER CTP

#### Cryptologic Resource Coordinator (CRC)

- Officer assigned some or the entire OTC’s detailed responsibilities for management of cryptologic as-sets, cryptologic coverage and tasking plans, personnel and augmentation requirements, cryptologic direct support operations, signal security operations, direct service interfaces, cryptologic sanitation, and correlation procedures

**Force Track Coordinator (FTC)**

- Responsible for ensuring an effective Link 11/16 picture is available to the force

**Helicopter Element Coordinator (HEC) – Call Sign: Lima**

- Allocates and apportsions helicopters for the CWC

**Submarine Operations Coordinating Authority (SOCA)**

- Functions as the single point of contact in the composite warfare organization for the SUBOPAETH and individual submarines assigned

**Tomahawk Land Attack Missile Launch Area Coordinator (LAC)**

- Responsible for leading launch operations for Tomahawk strikes





## U.S. Navy Fact Sheet

### Amphibious Assault Ships - LHA/LHD/LHA(R)

#### Description

The largest of all amphibious warfare ships; resembles a small aircraft carrier; capable of Vertical/Short Take-Off and Landing (V/STOL), Short Take-Off Vertical Landing (STOVL), Vertical Take-Off and Landing (VTOL) tilt-rotor and Rotary Wing (RW) aircraft operations; contains a well deck to support use of Landing Craft, Air Cushioned (LCAC) and other watercraft (with exception of the first two LHA(R) class ships, LHA 6 and LHA 7, which have no well deck).



#### Features

Modern U.S. Navy Amphibious Assault Ships project power and maintain presence by serving as the cornerstone of the Amphibious Readiness Group (ARG) / Expeditionary Strike Group (ESG). A key element of the Seapower 21 pillars of Sea Strike and Sea Basing, these ships transport and land elements of the Marine Expeditionary Unit (MEU) or Marine Expeditionary Brigade (MEB) with a combination of aircraft and landing craft.

The Tarawa-class LHAs and Wasp-class LHDs provide the Marine Corps with a means of ship-to-shore movement by helicopter in addition to movement by landing craft. Three LHAs — which have extensive storage capacity and can accommodate Landing Craft Utility (LCU) and LCAC craft — were active during Operations Desert Shield / Storm. Since that time, LHAs (and later LHDs) have been participants in major humanitarian-assistance, occupation and combat operations in which the United States has been involved. Such operations have included participating as launch platforms for Marine Corps expeditionary forces into Afghanistan during Operation Enduring Freedom in 2001 and 2002, Iraq in Operation Iraqi Freedom in 2003 and humanitarian support after the catastrophic Tsunami in 2004. During Operation Iraqi Freedom, two LHDs served as "Harrier Carriers," launching an air group of AV-8B attack aircraft against targets inside Iraq. In 2004, LHAs and LHDs were used to transport thousands of Marines and their equipment to Iraq and Afghanistan for combat operations. Most recently, critical post Hurricane Katrina support was provided in New Orleans by LHD 7 (Iwo Jima) where thousands of police, fire and rescue personnel were hosted onboard during recovery operations and IWO JIMA operated as the central command and control hub. With delivery of Iwo Jima in 2001, the Navy and Marine Corps reached a desired force level of amphibious warfare ships — LHAs/LHDs, LPDs and LSD 41/49s — that provide fully capable Expeditionary Strike Groups to fulfill anticipated forward-presence and expeditionary requirements. The eighth LHD, Makin Island (LHD 8), was delivered to the Navy in April 2009, and commissioned in October 2009. LHD 8 differs from earlier ships of the class in that it is powered by gas turbine engines rather than steam turbines. LHD 8 is the first U.S. Navy amphibious assault ship to replace steam boilers with gas turbines, and the first Navy surface ship to be equipped with both gas turbines and an Auxiliary Propulsion System (APS). This unique auxiliary propulsion system is designed with fuel efficiency in mind. The APS uses two induction-type Auxiliary Propulsion Motors (APM) powered from the ship's electrical grid instead of using main propulsion engines to power the ship's shaft. Instead of using its gas turbines which are less efficient at lower speeds, the ship will be able to use its APS for roughly 75 percent of the time the ship is underway. Over the course of Makin Island's lifecycle, the Navy expects to see a savings of more than \$250 million. Because the gas turbines will be used

infrequently, the Navy will also save on maintenance and lifecycle costs. The entire propulsion and electric system is controlled by a comprehensive machinery control system that also controls and monitors damage control, ballasting and de-ballasting, fuel fill and auxiliary machinery. The machinery control system allows the ship to switch from gas turbine to electric propulsion on the fly. It is fully distributed, accessible from multiple locations, and every console provides full system control and monitoring capabilities of the entire engineering plant. The propulsion plant and electrical distribution and auxiliary systems designed and built for Makin Island will also be used aboard the future USS America (LHA 6), the first ship in the LHA Replacement program. LHA 6 was placed under contract in June 2007 with NGSB. LHA 6 will be an aviation-centric modified repeat of the LHD 8 and is scheduled for delivery to the Navy in 2013. Key differences between LHA 6 and the LHD class ships include an enlarged hangar deck, enhanced aviation maintenance facilities, increased aviation fuel capacity, additional aviation storerooms, removal of the well deck, and an electronically reconfigurable C4ISR suite. Four of the original five Tarawa-class LHAs were recently decommissioned: *USS Belleau Wood* (LHA 3) in October 2005, *USS Saipan* (LHA 2) in April 2007, *USS Tarawa* (LHA 1) in March 2009 and *USS Nassau* (LHA 4) in March 2011.

### Background

Amphibious warships are designed to support the Marine Corps tenets of Operational Maneuver From the Sea (OMFTS) and Ship to Objective Maneuver (STOM). They must be able to sail in harm's way and provide a rapid buildup of combat power ashore in the face of opposition. Because of their inherent capabilities, these ships have been and will continue to be called upon to also support humanitarian and other contingency missions on short notice. The United States maintains the largest and most capable amphibious force in the world. The Wasp-class LHDs are currently the largest amphibious ships in the world. The lead ship, *USS Wasp* (LHD 1) was commissioned in July 1989 in Norfolk, Va. LHA Replacement or LHA(R) is the next step in the incremental development of the "Big Deck Amphib". She is being designed to accommodate the Marine Corps' future Air Combat Element (ACE) including F-35B Joint Strike Fighter (JSF) and MV-22 Osprey with additional aviation maintenance capability and increased fuel capacities, while also providing additional cargo stowage capacities and enabling a broader, more flexible Command and Control capability.

### Program Status

LHA 5 and LHDs 1-8 are in-service. LHA 6 (America) is planned for delivery to the Fleet in 2013. A keel authentication ceremony for the future *USS America* (LHA 6) was held July 17, 2009, at Northrop Grumman Shipbuilding's Ingalls shipyard in Pascagoula, Miss.

### Point Of Contact

Office of Corporate Communication (SEA 00D)  
Naval Sea Systems Command  
Washington, D.C. 20376

### General Characteristics, LHA(R) Class LHA (6)

**Builder:** Huntington Ingalls Industries Inc., Ingalls Operations, Pascagoula, Miss.

**Date Deployed:** Scheduled for delivery to the fleet in 2013.

**Propulsion:** Two marine gas turbines, two shafts, 70,000 total brake horsepower, two 5,000 horsepower auxiliary propulsion motors.

**Length:** 844 feet (257.3 meters).

**Beam:** 106 feet (32.3 meters).

**Displacement:** Approximately 44,971 long tons full load (45,695 metric tons).

**Speed:** 20+ knots.

**Crew:** 1,059 (65 officers)

**Load:** 1,687 troops (plus 184 surge).

**Armament:** Two RAM launchers; two NATO *Sea Sparrow* launchers (with Evolved *Sea Sparrow* Missile (ESSM)); two 20mm *Phalanx* CIWS mounts; seven twin .50 cal. machine guns.

**Aircraft:** A mix of: F-35B Joint Strike Fighters (JSF) STOVL aircraft; MV-22 *Osprey* VTOL tiltrotors; CH-53E *Sea Stallion* helicopters; UH-1Y *Huey* helicopters; AH-1Z *Super Cobra* helicopters; MH-60S *Seahawk* helicopters.

**Homeport:** PCU America (LHA 6), No homeport - under construction

### Ships:

*PCU America* (LHA6), No homeport - Under Construction

### General Characteristics, Wasp Class

**Builder:** Northrop Grumman Ship Systems Ingalls Operations, Pascagoula, MS.

**Date Deployed:** July 29, 1989 (*USS Wasp*)

**Propulsion:** (LHDs 1-7) two boilers, two geared steam turbines, two shafts, 70,000 total brake

horsepower; (LHD 8) two gas turbines, two shafts; 70,000 total shaft horsepower, two 5,000 horsepower auxiliary propulsion motors.

**Length:** 844 feet (253.2 meters).

**Beam:** 106 feet (31.8 meters).

**Displacement:** LHDs 1-4: 40,650 tons full load (41,302.3 metric tons)

LHDs 5-7: 40,358 tons full load (41,005.6 metric tons)

LHD 8: 41,772 tons full load (42,442.3 metric tons).

**Speed:** 20+ knots (23.5+ miles per hour).

**Crew:** Ships Company: 66 officers, 1,004 enlisted

LHD 8: 65 officers, 994 enlisted

Marine Detachment: 1,687 troops (plus 184 surge).

**Armament:** Two RAM launchers; two NATO *Sea Sparrow* launchers; three 20mm *Phalanx* CIWS mounts (two on LHD 5-8); four .50 cal. machine guns; four 25 mm Mk 38 machine guns (LHD 5-8 have three 25 mm Mk 38 machine guns).

**Aircraft:** 12 CH-46 *Sea Knight* helicopters; 4 CH-53E *Sea Stallion* helicopters; 6 AV-8B *Harrier* attack aircraft; 3 UH-1N *Huey* helicopters; 4 AH-1W *Super Cobra* helicopters. (planned capability to embark MV-22 *Osprey* VTOL tilt-rotors).

**Landing/Attack Craft:** 3 LCACs or 2 LCUs.

**Ships:**

*USS Wasp* (LHD 1), Norfolk, VA

*USS Essex* (LHD 2), Sasebo, Japan

*USS Kearsarge* (LHD 3), Norfolk, VA

*USS Boxer* (LHD 4), San Diego, CA

*USS Bataan* (LHD 5), Norfolk, VA

*USS Bonhomme Richard* (LHD 6), San Diego, CA

*USS Iwo Jima* (LHD 7), Norfolk, VA

*USS Makin Island* (LHD 8), San Diego, CA

**General Characteristics, Tarawa Class**

**Builder:** Ingalls Shipbuilding, Pascagoula, MS.

**Date Deployed:** May 29, 1976 (*USS Tarawa*)

**Propulsion:** Two boilers, two geared steam turbines, two shafts, 70,000 total shaft horsepower.

**Length:** 820 feet (249.9 meters).

**Beam:** 106 feet (31.8 meters).

**Displacement:** 39,400 tons (40,032 metric tons) full load.

**Speed:** 24 knots (27.6 miles per hour).

**Crew:** Ships Company: 82 officers, 882 enlisted

Marine Detachment 1,900 plus.

**Armament:** Two RAM launchers; two *Phalanx* 20 mm CIWS mount; three .50 cal. machine guns; four 25 mm Mk 38 machine guns.

**Aircraft:** 12 CH-46 *Sea Knight* helicopters; 4 CH-53E *Sea Stallion* helicopters; 6 AV-8B *Harrier* attack aircraft; 3 UH-1N *Huey* helicopters; 4 AH-1W *Super Cobra* helicopters.

**Landing/Attack Craft:** 4 LCUs or 2 LCUs and 1 LCAC.

**Ships:**

*USS Tarawa* (LHA 1), San Diego, CA

*USS Saipan* (LHA 2)

*USS Belleau Wood* (LHA 3)

*USS Nassau* (LHA 4), Norfolk, VA

*USS Peleliu* (LHA 5), San Diego, CA

Last Update: 10 November 2011



## United States Navy

# Fact File

### U.S. Navy Fact Sheet

## Amphibious Transport Dock - LPD

### Description

Amphibious transport dock ships are warships that embark, transport, and land elements of a landing force for a variety of expeditionary warfare missions.

### Features

LPDs are used to transport and land Marines, their equipment and supplies by embarked air cushion (LCAC) or conventional landing craft and Expeditionary Fighting Vehicles (EFV) or Amphibious Assault Vehicles (AAV) augmented by helicopters or vertical take-off and landing aircraft (MV 22). These ships support amphibious assault, special operations or expeditionary warfare missions and can serve as secondary aviation platforms for amphibious ready groups.



### Background

The versatile Austin-class LPDs provide substantial amphibious lift for Marines and their vehicles and cargo. Additionally, they serve as the secondary aviation platform for Amphibious Ready Groups. The oldest of the class turned 43 this year. As the new San Antonio-class LPDs enter service, Austin-class LPDs will be decommissioned. The ships of the LPD 17 class are a key element of the Navy's seabase transformation. Collectively, these ships functionally replace over 41 ships (LPD 4, LSD 36, LKA 113, and LST 1179 classes of amphibious ships) providing the Navy and Marine Corps with modern, seabased platforms that are networked, survivable, and built to operate with 21st century transformational platforms, such as the MV-22 Osprey, the Expeditionary Fighting Vehicle (EFV), and future means by which Marines are delivered ashore. A contract for final design and construction of San Antonio (LPD 17), the lead ship in the class, was awarded in December 1996; actual construction commenced in August 2000. *USS San Antonio* was delivered to the Navy in July 2005. LPDs 18-21 have also been delivered to the Navy. New York is the first of three LPD 17-class ships built in honor of the victims of the Sept. 11, 2001, terrorist attacks. The ship's bow stem was constructed using 7.5 tons of steel salvaged from the World Trade Center. The Navy named the 8th and 9th ships of the class -- Arlington and Somerset -- in honor of the victims of the attacks on the Pentagon and United Flight 93, respectively. Arlington and Somerset are also incorporating materials salvaged from those sites. LPDs 22-26 are currently under construction at Huntington Ingalls Industries (HII) on the Gulf Coast, and will deliver over the next few years. The Navy awarded a long lead time material contract to HII for LPD 27 in 2010.

### Point Of Contact

Corporate Communications Office  
Naval Sea Systems Command (SEA DDD)  
Washington, D.C. 20376

### General Characteristics, *San Antonio* class

**Builder:** Huntington Ingalls Industries (formerly Northrop Grumman Ships Systems), with Raytheon Systems Corporation and Intergraph Corporation.

**Propulsion:** Four sequentially turbocharged marine Colt-Pielstick Diesels, two shafts, 41,600 shaft horsepower.

**Length:** 684 feet (208.5 meters).

**Beam:** 105 feet (31.9 meters).

**Displacement:** Approximately 25,586 long tons (full load).

**Speed:** In excess of 22 knots

**Crew:** Ship's Company: 360 Sailors (28 officers, 332 enlisted) and 3 Marines.

Embarked Landing Force: 699 (66 officers, 633 enlisted); surge capacity to 800.

**Armament:** Two MK 46 Mod 2 guns, fore and aft; two Rolling Airframe Missile launchers, fore and aft: nine .50 calibre machine guns.

**Aircraft:** Launch or land two CH53E *Super Stallion* helicopters or two MV-22 *Osprey* tilt rotor aircraft or up to four CH-46 *Sea Knight* helicopters, AH-1 or UH-1 helicopters.

**Landing/Attack Craft:** Two LCACs or one LCU; and 14 Expeditionary Fighting Vehicles/Amphibious Assault Vehicles.

**Ships:**

*USS San Antonio* (LPD 17), Norfolk, VA

*USS New Orleans* (LPD 18), San Diego, CA

*USS Mesa Verde* (LPD 19), Norfolk, VA

*USS Green Bay* (LPD 20), San Diego, CA

*USS New York* (LPD 21), Norfolk, VA

*San Diego* (LPD 22) - Christened June 12, 2010.

*Anchorage* (LPD 23) - Christened May 14, 2011

*Arlington* (LPD 24) - Christened March 26, 2011

*Somerset* (LPD 25) - under construction

John P. Murtha (LPD 26) - under construction

**General Characteristics, Austin class**

**Builder:** LPD 4-6, New York Naval Shipyard

LPD 7 and LPD 8, Ingalls Shipbuilding

LPD 9, 10, 12-15, Lockheed Shipbuilding.

**Date Deployed:** Feb. 6, 1965 (USS Austin)

**Unit Cost:** \$235-419 million.

**Propulsion:** Two boilers, two steam turbines, two shafts, 24,000 shaft horsepower.

**Length:** 570 feet (171 meters).

**Beam:** 84 feet (25.2 meters).

**Displacement:** Approximately 17,000 tons (17,272.82 metric tons) full load.

**Speed:** 21 knots (24.2 mph, 38.7 kph).

**Crew:** Ship's Company: 420 (24 officers, 396 enlisted), Marine Detachment: 900.

**Armament:** Two 25mm Mk 38 guns; two *Phalanx* CIWS; and eight .50-calibre machine guns.

**Aircraft:** Up to six CH-46 *Sea Knight* helicopters.

**Ships:**

*USS Austin* (LPD 4), Norfolk, VA

*USS Ogden* (LPD 5), San Diego, CA

*USS Duluth* (LPD 6), San Diego, CA

*USS Cleveland* (LPD 7), San Diego, CA

*USS Dubuque* (LPD 8), San Diego, CA

*USS Denver* (LPD 9), Sasebo, Japan

*USS Juneau* (LPD 10), San Diego, CA

*USS Nashville* (LPD 13), No homeport - decommissioned - Decommissioned Sept. 30, 2009

*USS Ponce* (LPD 15), Norfolk, VA

Last Update: 10 November 2011



## U.S. Navy Fact Sheet

### Dock Landing Ship - LSD

#### Description

Dock Landing Ships support amphibious operations including landings via Landing Craft Air Cushion (LCAC), conventional landing craft and helicopters, onto hostile shores.

#### Background

These ships transport and launch amphibious craft and vehicles with their crews and embarked personnel in amphibious assault operations.



LSD 41 was designed specifically to operate LCAC vessels. It has the largest capacity for these landing craft (four) of any U.S. Navy amphibious platform. It will also provide docking and repair services for LCACs and for conventional landing craft.

In 1987, the Navy requested \$324.2 million to fund one LSD 49 (Cargo Variant). The ship differs from the original LSD 41 by reducing its number of LCACs to two in favor of additional cargo capacity.

#### Point Of Contact

Office of Corporate Communication (SEA 00D)  
Naval Sea Systems Command  
Washington, D.C. 20376

#### General Characteristics, *Harpers Ferry* Class

**Builder:** Avondale Industries Inc., New Orleans, LA.

**Date Deployed:** 7 January 1995 (*USS Harpers Ferry*)

**Propulsion:** Four Colt Industries, 16 Cylinder Diesels, two shafts, 33,000 shaft horsepower.

**Length:** 609 feet (185.6 meters).

**Beam:** 84 feet.

**Displacement:** 16,708 tons (16,976.13 metric tons) full load.

**Speed:** 20+ knots (23.5+ miles per hour).

**Crew:** Ships Company: 22 officers, 397 enlisted; Marine Detachment: 402 plus 102 surge.

**Armament:** Two 25mm MK 38 Machine Guns, Two 20mm *Phalanx* CIWS mounts and Six .50 cal. machine guns, two Rolling Airframe Missile (RAM) mounts.

**Landing/Attack Craft:** Two Landing Craft, Air Cushion.

#### Ships:

*USS Harpers Ferry* (LSD 49), San Diego, CA

*USS Carter Hall* (LSD 50), Little Creek, VA

*USS Oak Hill* (LSD 51), Little Creek, VA

*USS Pearl Harbor* (LSD 52), San Diego, CA

#### General Characteristics, *Whidbey Island* Class

**Builder:** Lockheed Shipbuilding, Seattle, WA - LSD 41-43  
Avondale Shipyards, New Orleans, LA - LSD 44 - LSD 48.

**Date Deployed:** Feb. 9, 1985 (*USS Whidbey Island*)

**Propulsion:** Four Colt Industries, 16 Cylinder Diesels, two shafts, 33,000 shaft horsepower.

**Length:** 609 feet (185.6 meters).

**Beam:** 84 feet.

**Displacement:** 15,939 tons (16,194.79 metric tons) full load.

**Speed:** 20+ knots (23.5+ miles per hour).

**Crew:** Ships Company: 22 officers, 391 enlisted; Marine Detachment: 402 plus 102 surge.

**Armament:** Two 25mm MK 38 Machine Guns; Two 20mm *Phalanx* CIWS mounts and Six .50 cal. machine guns, two Rolling Airframe Missile (RAM) mounts.

**Landing/Attack Craft:** Four Landing Craft, Air Cushion.

**Ships:**

*USS Whidbey Island* (LSD 41), Little Creek, VA

*USS Germantown* (LSD 42), Sasebo, Japan

*USS Fort McHenry* (LSD 43), Little Creek, VA

*USS Gunston Hall* (LSD 44), Little Creek, VA

*USS Comstock* (LSD 45), San Diego, CA

*USS Tortuga* (LSD 46), Sasebo, Japan

*USS Rushmore* (LSD 47), San Diego, CA

*USS Ashland* (LSD 48), Little Creek, VA

Last Update: 10 November 2011



## U.S. Navy Fact Sheet

### Landing Craft, Air Cushioned - LCAC

#### Description

Air cushioned vehicle for transporting, ship-to-shore and across the beach, personnel, weapons, equipment, and cargo of the assault elements of the Marine Air-Ground Task Force.

#### Features

The Landing Craft Air Cushion (LCAC) is a high-speed, over-the-beach fully amphibious landing craft, capable of carrying a 60-75 ton payload. It is used to transport the weapons systems, equipment, cargo and personnel of the assault elements of the Marine Air-Ground Task Force from ship to shore and across the beach. LCAC can carry heavy payloads, such as an M-1 tank, at high speeds. The LCAC payload capability and speed combine to significantly increase the ability of the Marine Ground Element to reach the shore. Air cushion technology allows this vehicle to reach more than 70 percent of the world's coastline, while only about 15 percent of that coastline is accessible by conventional landing craft.



#### Background

Concept Design of the present day LCAC began in the early 1970s with the full-scale Amphibious Assault Landing Craft (AALC) test vehicle. During the advanced development stage, two prototypes were built. JEFF A was designed and built by Aerojet General in California. JEFF B was designed and built by Bell Aerospace in New Orleans, Louisiana. These two craft confirmed the technical feasibility and operational capability that ultimately led to the production of LCAC. JEFF B was selected as the design basis for today's LCAC. The first LCAC was delivered to the Navy in 1984 and Initial Operational Capability (IOC) was achieved in 1986. Approval for full production was granted in 1987. After an initial 15-craft production competition contract was awarded to each of two companies, Textron Marine and Land Systems (TMLS) of New Orleans, La., and Avondale Gulfport Marine, TMLS was selected to build the remaining craft. A total of ninety-one LCAC have now been built. The final craft, LCAC 91, was delivered to the U.S. Navy in 2001. This craft served as the basis for the Navy's LCAC Service Life Extension Program (SLEP). The program of record is to SLEP 72 operational craft and 1 R&D craft. Thirty-three LCACs have been SLEP'd as of Aug. 31, 2009 (includes the 1 R&D craft). Ten LCACs are under contract to be SLEP'd as of Sept. 30, 2011. L-3 Titan is under contract for five. Oceaneering Engineering Inc. is under contract for four. LCAC first deployed in 1987 aboard USS Germantown (LSD 42). LCAC are transported in and operate from all amphibious well deck ships including LHA, LHD, LSD and LPD. The craft operates with a crew of five. In addition to beach landing, LCAC provides personnel transport, evacuation support, lane breaching, mine countermeasure operations, and Marine and Special Warfare equipment delivery.

#### Program Status

All of the planned 91 craft have been delivered to the Navy. A Service Life Extension Program (SLEP) is currently in progress to add service life to the craft design life of 10 years, delaying the need to replace these versatile craft.

#### Point Of Contact

Office of Corporate Communication (SEA 00D)  
Naval Sea Systems Command  
Washington, D.C. 20376

**General Characteristics**

**Builder:** Textron Marine and Land Systems/Avondale Gulfport Marine.

**Date Deployed:** 1982.

**Propulsion:** *Legacy:* 4-Allied-Signal TF-40B gas turbines (2 propulsion / 2 lift); 16,000 hp sustained; 2-shrouded reversible pitch airscrews; 4-dbl-entry fans, centrifugal or mixed flow (lift)

*SLEP:* 4-Vericor Power Systems ETF-40B gas turbines with Full Authority Digital Engine Control

**Length:** 87 feet 11 inches (26.4 meters).

**Beam:** 47 feet (14.3 meters).

**Displacement:** 87.2 tons (88.60 metric tons) light; 170-182 tons (172.73 - 184.92 metric tons) full load.

**Speed:** 40+ knots (46+ mph; 74.08 kph) with full load.

**Range:** 200 miles at 40 kts with payload / 300 miles at 35 kts with payload.

**Crew:** Five.

**Load:** 60 tons / 75 ton overload (54.43/68.04 tonnes)

**Armament:** 2 - 12.7mm MGs. Gun mounts will support: M-2HB .50 cal machine gun; Mk-19 Mod3 40mm grenade launcher; M-60 machine gun.

**Electronics:** Radars, Navigation: Marconi LN 66; I band / Sperry Marine Bridge Master E.

Last Update: 10 November 2011



## U.S. Navy Fact Sheet

### Landing Craft, Mechanized and Utility - LCM/LCU

#### Description

Landing craft are used by amphibious forces to transport equipment and troops to the shore. Landing craft are also used to support civilian humanitarian/maritime operations.

#### Features

Landing craft are capable of transporting cargo, tracked and/or wheeled vehicles and troops from amphibious assault ships to beachheads or piers. LCMs have a bow ramp for onload/offload. LCUs have both bow and stern ramps for onload/offload and have the ability to operate at sea for up to 10 days.



#### Background / Program Status

The use of landing craft in amphibious assault dates from World War II. The craft are carried aboard amphibious assault ships to the objective area.

#### Point Of Contact

Office of Corporate Communication (SEA 00D)  
Naval Sea Systems Command  
Washington, D.C. 20376

#### General Characteristics, LCU 1610, 1627 and 1646 Class

**Propulsion:** 2- Detroit 12V-71 Diesel engines, twin shaft, 680 hp sustained, Kort nozzles.  
**Length:** 134.9 feet (41.1 meters).  
**Beam:** 29 feet (8.8 meters).  
**Displacement:** 200 tons (203.21 metric tons) light; 375 tons (381.02 metric tons) full load.  
**Speed:** 11 kts (12.7 mph, 20.3 kph).  
**Range:** 1200 miles at 8 knots.  
**Crew:** 14  
**Load:** 170 tons (172.73 metric tons)  
Military Lift: M1A1 tanks (3), LAVs (10) or 400+ troops; 125 tons of cargo.  
**Armament:** 4- 50 cal MGs.  
**Electronics:** Furuno Radar Navigation; C4I up-grade under development.

#### General Characteristics, LCM 8 Type Class

**Propulsion:** 2- Detroit 12V-71 Diesel engines; 680hp sustained; twin shafts.  
**Length:** 73.7 feet (22.5 meters).  
**Beam:** 21 feet (6.4 meters).  
**Displacement:** 105 tons (106.69 metric tons) full load.  
**Speed:** 12 kts (13.8 mph, 22.2 kph).  
**Range:** 190 miles at 9kts full load.  
**Crew:** 5  
**Load:** 180 tons (182.89 metric tons)  
Military lift: 1- M48 or 1- M60 tank or 200 troops.

**General Characteristics, LCM 6 Type Class**

**Propulsion:** 2- Detroit 6-71 Diesel engines; 348 hp sustained; twin shaft, or 2- Detroit 8V-71 Diesel engines; 460 hp sustained; twin shaft.

**Length:** 56.2 feet (17.1 meters).

**Beam:** 14 feet (4.3 meters).

**Displacement:** 64 tons (65.03 metric tons) full load.

**Speed:** 9 kts (10.3 mph, 16.6 kph).

**Range:** 130 miles at 9 knots.

**Crew:** 5

**Load:** 34 tons (34.55 metric tons) or 80 troops.

Last Update: 2 December 2011



## United States Navy

# Fact File

### U.S. Navy Fact Sheet

#### Aircraft Carriers - CVN

##### Description

Aircraft carriers are the centerpiece of America's Naval forces. On any given day, aircraft carriers exercise the Navy core capabilities of power projection, forward presence, humanitarian assistance, deterrence, sea control and maritime security.

##### Features

The aircraft carrier continues to be the centerpiece of the forces necessary for forward presence. In times of crisis, the first question leaders ask in a crisis is: "Where are the carriers?" Often the presence of an aircraft carrier has deterred potential adversaries from striking against U.S. interests. Aircraft Carriers support and operate aircraft that engage in attacks on airborne, afloat and ashore targets that threaten free use of the sea; and engage in sustained power projection operations in support U.S. and coalition ground forces in Operation Enduring Freedom and Iraqi Freedom. The aircraft carrier and its strike group also engage in maritime security operations to interdict threats to merchant shipping and prevent the use of the seas as a highway for terrorist traffic. Aircraft also provide unique capabilities for disaster response and humanitarian assistance. The embarked carrier air wing provides helicopters for direct support and C4I assets to support them and ensure aid is routed quickly and safely. The 10 Nimitz class aircraft carriers are the largest warships in the world, each designed for an approximately 50 year service life with one mid-life refueling. USS Nimitz (CVN 68), USS Dwight D. Eisenhower (CVN 69), and USS Carl Vinson (CVN 70) have all completed their Refueling Complex Overhauls (RCOH) at Newport News, VA., with USS Theodore Roosevelt (CVN 71) commenced RCOH in 2009. The next generation of aircraft carrier, the Gerald R. Ford class (CVN 78) was ordered in 2008 and is slated to be delivered in 2015 to replace USS Enterprise (CVN 65).



##### Gerald R. Ford class

The Gerald R. Ford class is the future aircraft carrier replacement class for USS Enterprise and CVN 68, or Nimitz class aircraft carriers. Gerald R. Ford (CVN 78) was ordered from Newport News Shipbuilding on Sept. 10, 2008, and is scheduled to be delivered in 2015. The Gerald R. Ford class will be the premier forward asset for crisis response and early decisive striking power in a major combat operation. Gerald R. Ford class aircraft carriers and carrier strike groups will provide the core capabilities of forward presence, deterrence, sea control, power projection, maritime security and humanitarian assistance. The class brings improved warfighting capability, quality of life improvements for our Sailors and reduced acquisition and life cycle costs.

Each ship in the new class will save more than \$5 billion in total ownership costs during its 50-year service life, compared to the Nimitz-class. For comparison, the total ownership cost for a Nimitz-class ship is \$32.1 billion in FY 04 constant year dollars, and the total ownership cost for CVN 78 is expected to be \$26.8 billion. Half of the total ownership cost for an aircraft carrier is allocated to the direct and indirect costs of manpower for operations and maintenance of the ship. The CVN 78 is being designed to operate effectively with nearly 800 fewer crew members than a CVN 68-class ship. Improvements in the ship design will allow the embarked air wing to operate with 400 fewer personnel. Technologies and ship design initiatives that replace maintenance-intensive systems with low maintenance systems are

expected to reduce watch standing and maintenance workload for the crew. Gerald R. Ford is the first aircraft carrier designed with all electric utilities, eliminating steam service lines from the ship, reducing maintenance requirements and improving corrosion control efforts. The new A1B reactor, Electromagnetic Aircraft Launch System (EMALS), Advanced Arresting Gear (AAG) and Dual Band Radar (DBR) all offer enhanced capability with reduced manning requirements. The Gerald R. Ford class is designed to maximize the striking power of the embarked carrier air wing. The ship's systems and configuration are optimized to maximize the sortie generation rate (SGR) of attached strike aircraft, resulting in a 25 percent increase in SGR over the Nimitz class. The ship's configuration and electrical generating plant are designed to accommodate any foreseeable requirements during its 50- year service life. The Gerald R. Ford class builds upon the Navy's legacy of aircraft carrier innovation stretching back to the first aircraft carrier, USS Langley (CV-1) and continuing to the present day. The introduction of jet aircraft, angled decks and nuclear power were all innovations that kept the fleet relevant for Cold War needs. Gerald R. Ford continues the aircraft carrier history of innovation and adaptability that will enable her to serve our country for decades to come.

#### **Point Of Contact**

Naval Sea Systems Command  
Office of Corporate Communications  
Washington, D.C. 20376

#### **General Characteristics, *Nimitz* class**

**Builder:** Newport News Shipbuilding Co., Newport News, VA.

**Date Deployed:** May 3, 1975 (*USS Nimitz*).

**Unit Cost:** About \$4.5 billion each.

**Propulsion:** Two nuclear reactors, four shafts.

**Length:** 1,092 feet (332.85 meters).

**Beam:** 134 feet (40.84 meters); Flight Deck Width: 252 feet (76.8 meters).

**Displacement:** Approximately 97,000 tons (87,996.9 metric tons) full load.

**Speed:** 30+ knots (34.5+ miles per hour).

**Crew:** Ship's Company: 3,200 - Air Wing: 2,480.

**Armament:** Multiple NATO *Sea Sparrow*, *Phalanx* CIWS, and Rolling Airframe Missile (RAM) mounts.

**Aircraft:** Approximately 60+.

#### **Ships:**

*USS Nimitz* (CVN 68), Bremerton, Wash.

*USS Dwight D. Eisenhower* (CVN 69), Norfolk, VA.

*USS Carl Vinson* (CVN 70), San Diego, CA.

*USS Theodore Roosevelt* (CVN 71), Norfolk, VA.

*USS Abraham Lincoln* (CVN 72), Everett, WA.

*USS George Washington* (CVN 73), Yokosuka, Japan

*USS John C. Stennis* (CVN 74), Bremerton, WA.

*USS Harry S. Truman* (CVN 75), Norfolk, VA.

*USS Ronald Reagan* (CVN 76), San Diego, CA.

*USS George H.W. Bush* (CVN 77), Norfolk, VA.

#### **General Characteristics, *Enterprise* class**

**Builder:** Newport News Shipbuilding Co., Newport News, Va.

**Date Deployed:** November 25, 1961 (*USS Enterprise*).

**Propulsion:** Eight nuclear reactors, four shafts.

**Length:** 1,101 feet 2 inches (335.64 meters).

**Beam:** 133 feet (39.9 meters); 252 feet (75.6 meters).

**Displacement:** 89,600 tons (81,283.8 metric tons) full load.

**Speed:** 30+ knots (34.5 miles per hour).

**Crew:** Ship's Company: 3,350 - Air Wing 2,480.

**Armament:** Multiple NATO *Sea Sparrow*, *Phalanx* CIWS, and rolling Airframe Missile (RAM) mounts.

**Aircraft:** Approximately 60+.

#### **Ships:**

*USS Enterprise* (CVN 65), Norfolk, VA

#### **General Characteristics, *Gerald R. Ford* class**

**Builder:** Newport News Shipbuilding, Newport News, VA.

**Propulsion:** Two nuclear reactors, four shafts.

**Length:** 1,092 feet

**Beam:** 134 feet, Flight Deck Width: 256 feet.

**Displacement:** approximately 100,000 long tons full load.

**Speed:** 30+ knots (34.5 miles per hour)

**Crew:** 4,660 (ship, air wing and staff).

**Armament:** Evolved Sea Sparrow Missile, Rolling Airframe Missile, CIWS.

**Aircraft:** 75+.

**Ships:**

*USS John F. Kennedy* (CV 67), Philadelphia, PA

PCU Gerald R. Ford (CVN 78)

PCU John F. Kennedy (CVN 79)

Last Update: 1 November 2011



## U.S. Navy Fact Sheet

### Cruisers - CG

#### Description

Large combat vessel with multiple target response capability.

#### Features

Modern U.S. Navy guided missile cruisers perform primarily in a Battle Force role. These ships are multi-mission [Air Warfare (AW), Undersea Warfare (USW), Naval Surface Fire Support (NSFS) and Surface Warfare (SUW)] surface combatants capable of supporting carrier battle groups, amphibious forces, or of operating independently and as flagships of surface action groups. Cruisers are equipped with *Tomahawk* cruise missiles giving them additional long range Strike Warfare (STRW) capability. Some Aegis Cruisers have been outfitted with a Ballistic Missile Defense (BMD) capability.

#### Background

Technological advances in the Standard Missile coupled with the Aegis combat system in the *Ticonderoga* class Cruisers have increased the AAW capability of surface combatants to pinpoint accuracy from wave-top to zenith. The addition of *Tomahawk* in the CG-47 has vastly complicated unit target planning for any potential enemy and returned an offensive strike role to the surface forces that seemed to have been lost to air power at Pearl Harbor.

The lead ship of the class, *USS Ticonderoga* (CG 47) through CG-51 have been decommissioned. Over the next several years, many *Ticonderoga*-class guided-missile cruisers will undergo a structured modernization to ensure they reach their projected 35-year service life. Cruiser Modernization program aims to improve the CG-47 *Ticonderoga* class by modernizing the computing and display infrastructure, and the Hull, Mechanical and Electrical (HM&E) systems. Weapons and sensor sets will also be improved, in order to upgrade their anti-submarine capabilities, add short range electro-optical systems that can monitor the ship's surroundings without the use of radar emissions, as well as routine machinery upgrades to improve all areas of ship functionality. The modernized cruisers are expected to become more cost efficient to operate, as their lives are extended to serve in the fleet through the year 2030.

#### Point Of Contact

Office of Corporate Communication  
Naval Sea Systems Command (SEA 00D)  
Washington, D.C. 20376

#### General Characteristics, *Ticonderoga* Class

**Builder:** Ingalls Shipbuilding: CG 47-50, CG 52-57, 59, 62, 65-66, 68-69, 71-73

Bath Iron Works: CG 51, 58, 60-61, 63-64, 67, 70.

**Date Deployed:** 22 January 1983 (*USS Ticonderoga*)

**Unit Cost:** About \$1 billion each.

**Propulsion:** 4 General Electric LM 2500 gas turbine engines; 2 shafts, 80,000 shaft horsepower total.

**Length:** 567 feet.

**Beam:** 55 feet.

**Displacement:** 9,600 tons (9,754.06 metric tons) full load.

**Speed:** 30 plus knots.

**Crew:** 24 Officers, 340 Enlisted.

**Armament:** MK41 vertical launching system Standard Missile (MR); Vertical Launch ASROC (VLA)

Missile; Tomahawk Cruise Missile; Six MK-46 torpedoes (from two triple mounts); Two MK 45 5-inch/54 caliber lightweight guns; Two Phalanx close-in-weapons systems.

**Aircraft:** Two SH-60 *Seahawk* (LAMPS III).

**Ships:**

*USS Vincennes* (CG 49), Yokosuka, Japan  
*USS Thomas S. Gates* (CG 51), Pascagoula, MS  
*USS Bunker Hill* (CG 52), San Diego, CA  
*USS Mobile Bay* (CG 53), San Diego, CA  
*USS Antietam* (CG 54), San Diego, CA  
*USS Leyte Gulf* (CG 55), Norfolk, VA  
*USS San Jacinto* (CG 56), Norfolk, VA  
*USS Lake Champlain* (CG 57), San Diego, CA  
*USS Philippine Sea* (CG 58), Mayport, FL  
*USS Princeton* (CG 59), San Diego, CA  
*USS Normandy* (CG 60), Norfolk, VA  
*USS Monterey* (CG 61), Norfolk, VA  
*USS Chancellorsville* (CG 62), San Diego, CA  
*USS Cowpens* (CG 63), Yokosuka, Japan  
*USS Gettysburg* (CG 64), Mayport, FL  
*USS Chosin* (CG 65), Pearl Harbor, HI  
*USS Hue City* (CG 66), Mayport, FL  
*USS Shiloh* (CG 67), Yokosuka, Japan  
*USS Anzio* (CG 68), Norfolk, VA  
*USS Vicksburg* (CG 69), Mayport, FL  
*USS Lake Erie* (CG 70), Pearl Harbor, HI  
*USS Cape St. George* (CG 71), San Diego, CA  
*USS Vella Gulf* (CG 72), Norfolk, VA  
*USS Port Royal* (CG 73), Pearl Harbor, HI

Last Update: 2 November 2011



## U.S. Navy Fact Sheet

### Destroyers - DDG

#### Description

DDG 51 and DDG 1000 destroyers are warships that provide multi-mission offensive and defensive capabilities. Destroyers can operate independently or as part of carrier strike groups, surface action groups, amphibious ready groups, and underway replenishment groups.

#### Features

Guided missile destroyers are multi-mission [Anti-Air Warfare (AAW), Anti-Submarine Warfare (ASW), and Anti-Surface Warfare (ASUW)] surface combatants. The destroyer's armament has greatly expanded the role of the ship in strike warfare utilizing the MK-41 Vertical Launch System (VLS).

Features unique to DDG 1000:

- Eighty peripheral vertical launch system (VLS) cells, two Advanced Gun System (AGS) 155 millimeter (mm) guns, and two 57mm Close In Guns (CIGS).
- A stern boat ramp for two 7 meter (m) Rigid Hull Inflatable Boats (RHIBs), designed with room for two 11m RHIBs.
- Aviation capacity for two MH-60R or one MH-60R and 3 VT Unmanned Aerial Vehicles (UAVs).
- It will be powered by an Integrated Power System with an Integrated Fight Through Power (IFTP). This is created by an Advanced Induction Motor (AIM).
- A Composite superstructure with integrated apertures and low signature profile.
- Advanced sensors including a SPY-3 Multi-Function Radar.
- A wave-piercing "Tumblehome" hull form.

#### Background

Technological advances have improved the capability of modern destroyers culminating in the *Arleigh Burke* (DDG 51) class replacing the older *Charles F. Adams* and *Farragut* class guided missile destroyers. Named for the Navy's most famous destroyer squadron combat commander and three-time Chief of Naval Operations, the *USS Arleigh Burke* was commissioned July 4, 1991, and was the most powerful surface combatant ever put to sea. Like the larger *Ticonderoga*-class cruisers, DDG 51's combat capability centers around the Aegis Weapon System (AWS). AWS is composed of the SPY-1D multi-function phased array radar, advanced AAW and ASW systems, VLS, and the Tomahawk Weapon System. These advances allow the *Arleigh Burke*-class to continue the revolution at sea.

The *Arleigh Burke* class employs all-steel construction and is comprised of three separate variants or "Flights"; DDG 51-71 represent the original design and are designated Flight I ships, DDG 72-78 are Flight II ships, DDG 79 and Follow ships are built to the Flight IIA design.

Like most modern U.S. surface combatants, DDG 51 utilizes gas turbine propulsion. Employing four General Electric LM 2500 gas turbines to produce 100,000 total shaft horsepower via a dual shaft design, *Arleigh Burke*-class destroyers are capable of achieving 30 plus knot speeds in open seas.

The Flight IIA design includes the addition of the Kingfisher mine-avoidance capability, a pair of helicopter hangars which provide the ability to deploy with two organic Lamps MK III MH-60 helicopters, blast-hardened bulkheads, distributed electrical system and advanced networked systems. Additionally, DDGs 91-96 provide accommodations for the A/N WLD-1 Remote Mine-hunting System. The first Flight

IIA, *USS Oscar Austin*, was commissioned in August 2000.

A DDG Modernization program is underway, commencing with *USS Arleigh Burke* (DDG 51) to provide a comprehensive mid-life upgrade that will ensure the DDG 51 class will maintain mission relevance and remain an integral part of the Navy's Sea Power 21 Plan. The goal of the DDG Modernization effort is to reduce workload requirements and increase war fighting capabilities while reducing total ownership cost to the Navy through the use of a two phase program. The first phase will concentrate on the Hull, Mechanical, and Electrical systems to include new Giga Bit Ethernet connectivity in the engineering plant, a Digital Video Surveillance System, along with the Integrated Bridge, an Advanced Galley and other habitability modifications. A complete Open Architecture computing environment will be the foundation for war fighting improvements in the second phase for each ship. The upgrade plan consists of an improved Multi-Mission Signal processor to accommodate Ballistic Missile Defense capability and an improvement to radar performance in the littoral regions. Additional upgrades include, Cooperative Engagement Capability (CEC), Evolved Sea Sparrow Missile (ESSM), CIWS Blk 1B, SEWIP, and NULKA. The *Arleigh Burke*-class MK-41 Vertical Launching System (VLS) will be upgraded to support SM-3 and newer variants of the SM missile family. Throughout their intended service life, DDG 51 destroyers will continue to provide multi-mission offensive and defensive capabilities with the added benefit of Sea-based protection from the ballistic missile threat.

DDG 1000 Background: Developed under the DD(X) destroyer program, the *Zumwalt*-class destroyer (DDG 1000) is the lead ship of a class of next-generation multi-mission surface combatants tailored for land attack and littoral dominance with capabilities that defeat current and projected threats. DDG 1000 will triple naval surface fires coverage as well as tripling capability against anti-ship cruise missiles. DDG 1000 has a 50-fold radar cross section reduction compared to current destroyers, improves strike group defense 10-fold and has 10 times the operating area in shallow water regions against mines. For today's warfighter, DDG 1000 fills an immediate and critical naval-warfare gap, meeting validated Marine Corps fire support requirements.

The ship will carry two 155mm Advanced Gun Systems (AGSs) which fire the Long Range Land Attack Projectile. DDG 1000's AGS battery is designed to satisfy Marine Corps naval surface fires requirements by providing sustained precision and volume fire support for U.S. and coalition forces inland. AGS will fire precision-guided Long-Range Land Attack Projectiles that reach up to 63 nautical miles, tripling fire-support coverage compared to the Mk45 5-inch gun. In July 2008, Navy announced its decision to truncate the DDG 1000 program at three ships and restart the construction of BMD capable DDG 51s.

#### **Point Of Contact**

Office of Corporate Communication (SEA 00D)  
Naval Sea Systems Command  
Washington, D.C. 20376

#### **General Characteristics, *Arleigh Burke* class**

**Builder:** Bath Iron Works, Huntington Ingalls Industries

**SPY-1 Radar and Combat System Integrator:** Lockheed-Martin

**Date Deployed:** July 4, 1991 (*USS Arleigh Burke*)

**Propulsion:** Four General Electric LM 2500-30 gas turbines; two shafts, 100,000 total shaft horsepower.

**Length:** Flights I and II (DDG 51-78): 505 feet (153.92 meters)

Flight IIA (DDG 79 AF): 509½ feet (155.29 meters).

**Beam:** 59 feet (18 meters).

**Displacement:** DDG 51 through 71: 8,230 L tons (8,362.06 metric tons) full load DDG 72 through 78: 8,637 L tons (8,775.6 metric tons) full load DDG 79 and Follow: 9,496 L tons (9,648.40 metric tons) full load.

**Speed:** In excess of 30 knots.

**Crew:** 276

**Armament:** Standard Missile (SM-2MR); Vertical Launch ASROC (VLA) missiles; Tomahawk®; six MK-46 torpedoes (from two triple tube mounts); Close In Weapon System (CIWS), 5" MK 45 Gun, Evolved Sea Sparrow Missile (ESSM) (DDG 79 AF)

**Aircraft:** Two LAMPS MK III MH-60 B/R helicopters with Penguin/Hellfire missiles and MK 46/MK 50 torpedoes.

#### **Ships:**

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*USS Arleigh Burke* (DDG 51), Norfolk, VA

*USS Barry* (DDG 52), Norfolk, VA

*USS John Paul Jones* (DDG 53), San Diego, CA

*USS Curtis Wilbur* (DDG 54), Yokosuka, Japan

*USS Stout* (DDG 55), Norfolk, VA  
*USS John S McCain* (DDG 56), Yokosuka, Japan  
*USS Mitscher* (DDG 57), Norfolk, VA  
*USS Laboon* (DDG 58), Norfolk, VA  
*USS Russell* (DDG 59), Pearl Harbor, HI  
*USS Paul Hamilton* (DDG 60), Pearl Harbor, HI  
*USS Ramage* (DDG 61), Norfolk, VA  
*USS Fitzgerald* (DDG 62), Yokosuka, Japan  
*USS Stethem* (DDG 63), Yokosuka, Japan  
*USS Carney* (DDG 64), Mayport, FL  
*USS Benfold* (DDG 65), San Diego, CA  
*USS Gonzalez* (DDG 66), Norfolk, VA  
*USS Cole* (DDG 67), Norfolk, VA  
*USS The Sullivans* (DDG 68), Mayport, FL  
*USS Milius* (DDG 69), San Diego, CA  
*USS Hopper* (DDG 70), Pearl Harbor, HI  
*USS Ross* (DDG 71), Norfolk, VA  
*USS Mahan* (DDG 72), Norfolk, VA  
*USS Decatur* (DDG 73), San Diego, CA  
*USS McFaul* (DDG 74), Norfolk, VA  
*USS Donald Cook* (DDG 75), Norfolk, VA  
*USS Higgins* (DDG 76), San Diego, CA  
*USS O'kane* (DDG 77), Pearl Harbor, HI  
*USS Porter* (DDG 78), Norfolk, VA  
*USS Oscar Austin* (DDG 79), Norfolk, VA  
*USS Roosevelt* (DDG 80), Mayport, FL  
*USS Winston S Churchill* (DDG 81), Norfolk, VA  
*USS Lassen* (DDG 82), Yokosuka, Japan  
*USS Howard* (DDG 83), San Diego, CA  
*USS Bulkeley* (DDG 84), Norfolk, VA  
*USS McCampbell* (DDG 85), Yokosuka, Japan  
*USS Shoup* (DDG 86), Everett, WA  
*USS Mason* (DDG 87), Norfolk, VA  
*USS Preble* (DDG 88), San Diego, CA  
*USS Mustin* (DDG 89), Yokosuka, Japan  
*USS Chafee* (DDG 90), Pearl Harbor, HI  
*USS Pinckney* (DDG 91), San Diego, CA  
*USS Momsen* (DDG 92), Everett, WA  
*USS Chung-Hoon* (DDG 93), Pearl Harbor, HI  
*USS Nitze* (DDG 94), Norfolk, VA  
*USS James E Williams* (DDG 95), Norfolk, VA  
*USS Bainbridge* (DDG 96), Norfolk, VA  
*USS Halsey* (DDG 97), San Diego, CA  
*USS Forrest Sherman* (DDG 98), Norfolk, VA  
*USS Farragut* (DDG 99), Mayport, FL  
*USS Kidd* (DDG 100), San Diego, CA  
*USS Gridley* (DDG 101), San Diego, CA  
*USS Sampson* (DDG 102), San Diego, CA  
*USS Truxtun* (DDG 103), Norfolk, VA  
*USS Sterett* (DDG 104), San Diego, CA  
*USS Dewey* (DDG 105), No homeport  
*USS Stockdale* (DDG 106), San Diego, CA  
*USS Gravely* (DDG 107), Norfolk, VA  
*USS Wayne E. Meyer* (DDG 108), San Diego, CA  
*USS Jason Dunham* (DDG 109), Norfolk, VA  
*USS William P. Lawrence* (DDG 110), San Diego, CA  
*USS Spruance* (DDG 111), San Diego, CA  
*PCU Michael Murphy* (DDG 112), Pearl Harbor, HI  
 (under construction) (DDG-113-115)

**General Characteristics, Zumwalt class**

**Builder:** General Dynamics Bath Iron Works and Northrop Grumman Shipbuilding

**Length:** 600 ft

**Beam:** 80.7 ft

**Displacement:** 15,482 long tons

**Speed:** 30 kts

**Crew:** 148

**Aircraft:** (2) MH60R or (1) MH60R and (3) VTUAVs

**Ships:**

*USS O'Brien* (DD 975), Yokosuka, Japan

*USS Cushing* (DD 985), Yokosuka, Japan

*USS O'Bannon* (DD 987), Mayport, FL

*PCU Zumwalt* (DDG 1000), No homeport - under construction

*PCU Michael Monsoor* (DDG 1001), No homeport - under construction.

Last Update: 21 November 2011



## U.S. Navy Fact Sheet

### Frigates - FFG

#### Description

Frigates fulfill a Protection of Shipping (POS) mission as Anti-Submarine Warfare (ASW) combatants for amphibious expeditionary forces, underway replenishment groups and merchant convoys.

#### Background

The guided missile frigates (FFG) bring a short range anti-air warfare (AAW) capability (provided by their Phalanx Close-In Weapon System) to the frigate mission, but they have some limitations. Designed as cost efficient surface combatants, they lack the multi-mission capability necessary for modern surface combatants faced with multiple, high-technology threats. They also offer limited capacity for growth. Despite this, the FFG 7 class is a robust platform, capable of withstanding considerable damage. This "toughness" was aptly demonstrated when *USS Samuel B. Roberts* struck a mine and *USS Stark* was hit by two *Exocet* cruise missiles. In both cases the ships survived, were repaired and returned to the fleet. *USS Stark* was decommissioned in May 1999.

The Surface Combatant Force Requirement Study does not define any need for a single mission ship such as the frigate and there are no frigates planned in the Navy's five-year shipbuilding plan.

The lead ship of the class, USS OLIVER HAZARD PERRY (FFG 7), and the following ships have been decommissioned: FFG 9-16, 19-27, 30, 31, 33, 34, 39 and 53.

The former *USS McInerney* (FFG 8) was decommissioned and transferred to Pakistan Aug. 31, 2010. FFG 33, 39 and 53 were decommissioned in 2011 and all are designated for Foreign Military Sales (FMS).

FFG 17, 18, 35, & 44 were built for Australia.

#### Point Of Contact

Office of Corporate Communication  
Naval Sea Systems Command (SEA 000)  
Washington, D.C. 20376

#### General Characteristics, *Oliver Hazard Perry Class*

**Builder:** Bath Iron Works: FFG 7, 8, 11, 13, 15, 16, 21, 24, 26, 29, 32, 34, 36, 39, 42, 45, 47, 49, 50, 53, 55, 56, 58, 59

Todd Shipyards, Seattle: FFG 10, 17, 18, 20, 22, 28, 31, 35, 37, 40, 44, 48, 52, 61

Todd Shipyards, San Pedro, Calif.: FFG 9, 12, 14, 19, 23, 30, 33, 38, 41, 43, 46, 51, 54, 57, 60.

**Date Deployed:** 17 December 1977 (*Oliver Hazard Perry*)

**Propulsion:** Two General Electric LM 2500 gas turbine engines; 1 shaft, 41,000 shaft horsepower total.

**Length:** 445 feet (133.5 meters); 453 feet (135.9 meters) with LAMPS III modification.

**Beam:** 45 feet (13.5 meters).

**Displacement:** 4,100 tons (4,165.80 metric tons) full load.

**Speed:** 29 plus knots (33.4+ miles per hour).

**Crew:** 17 Officers, 198 Enlisted.

**Armament:** Six MK-46 torpedoes (from two triple mounts); One 76 mm (3-inch)/62 caliber MK 75 rapid fire gun; One *Phalanx* close-in-weapons system.

**Aircraft:** Two SH-60 (LAMPS III) in FFG 8, 28, 29, 32, 33, 36-61

One SH-2 (Lamps Mk-I) in FFG 9-19, 30, 31.

**Ships:**

*USS McInerney* (FFG 8), Mayport, FL - The former *USS McInerney* (FFG 8) was decommissioned and transferred to Pakistan Aug. 31, 2010.

*USS Boone* (FFG 28), Mayport, FL

*USS Stephen W. Groves* (FFG 29), Mayport, FL

*USS John L. Hall* (FFG 32), Mayport, FL

*USS Jarrett* (FFG 33), San Diego, CA

*USS Underwood* (FFG 36), Mayport, FL

*USS Crommelin* (FFG 37), Pearl Harbor, HI

*USS Curts* (FFG 38), San Diego, CA

*USS Doyle* (FFG 39), Mayport, FL

*USS Halyburton* (FFG 40), Mayport, FL

*USS McClusky* (FFG 41), San Diego, CA

*USS Klakring* (FFG 42), Mayport, FL

*USS Thach* (FFG 43), San Diego, CA

*USS De Wert* (FFG 45), Mayport, FL

*USS Rentz* (FFG 46), San Diego, CA

*USS Nicholas* (FFG 47), Norfolk, VA

*USS Vandegrift* (FFG 48), San Diego, CA

*USS Robert G. Bradley* (FFG 49), Mayport, FL

*USS Taylor* (FFG 50), Mayport, FL

*USS Gary* (FFG 51), San Diego, CA

*USS Carr* (FFG 52), Norfolk, VA

*USS Hawes* (FFG 53), Norfolk, VA

*USS Ford* (FFG 54), Everett, WA

*USS Elrod* (FFG 55), Norfolk, VA

*USS Simpson* (FFG 56), Mayport, FL

*USS Reuben James* (FFG 57), Pearl Harbor, HI

*USS Samuel B. Roberts* (FFG 58), Mayport, FL

*USS Kauffman* (FFG 59), Norfolk, VA

*USS Rodney M. Davis* (FFG 60), Everett, WA

*USS Ingraham* (FFG 61), Everett, WA

Last Update: 2 November 2011



## U.S. Navy Fact Sheet

### Fleet Replenishment Oilers - T-AO

#### Description

Fourteen fleet replenishment oilers are operated by Military Sealift Command and provide underway replenishment of fuel to U.S. Navy ships at sea and jet fuel for aircraft assigned to aircraft carriers. Three of the newest MSC underway replenishment oilers have double hulls.

#### Features

There are stations on both sides of each ship for underway replenishment of fuel and stores.



#### Background

Fitted with medium-speed diesel propulsion, the delivery of *USNS Patuxent* (T-AO 201), *USNS Rappahannock* (T-AO 204) and *USNS Laramie* (T-AO 203) was delayed by the decision to fit double hulls to meet the requirements of the Oil Pollution Act of 1990. This modification increased construction time from 32 to 42 months and reduced cargo capacity by 17 percent, although this can be restored in an emergency. Hull separation is 1.83 m at the sides and 1.98 m on the bottom.

#### Point Of Contact

Office of Public Affairs  
[Military Sealift Command](#)  
 Washington, D.C. 20398-5540  
 (202) 685-5055

#### General Characteristics, *Henry J. Kaiser Class*

**Builder:** Avondale Shipyards, Inc., New Orleans, LA.

**Propulsion:** 2 Colt-Pielstick 10 PC4.2 V 570 diesels; 34,442 hp(m) (24.3MW) sustained; 2 shafts; cp props.

**Length:** 677.5 feet (206.5 meters).

**Beam:** 97.5 feet (29.7 meters).

**Displacement:** 40,700 tons (41,353.16 metric ton); 42,000 tons (42,674.02 metric tons) [T-AO 201, 203-204] full load.

**Speed:** 20 knots (23 mph).

**Crew:** 89 civilian crew (19 officers); 6 Navy plus 29 spare.

**Load:** 180,000; 159,000 [T-AO 201, 203-204] barrels of fuel oil or aviation fuel.

**Aircraft:** Helicopter platform only.

**Homeport:** No homeports assigned.

#### Ships:

*USNS Henry J. Kaiser* (T-AO 187), No homeport

*USNS John Lenthall* (T-AO 189), No homeport

*USNS Walter S. Diehl* (T-AO 193), No homeport

*USNS John Ericsson* (T-AO 194), No homeport

*USNS Leroy Grumman* (T-AO 195), No homeport

*USNS Kanawha* (T-AO 196), No homeport

*USNS Pecos* (T-AO 197), No homeport  
*USNS Big Horn* (T-AO 198), No homeport  
*USNS Tippecanoe* (T-AO 199), No homeport  
*USNS Guadalupe* (T-AO 200), No homeport  
*USNS Patuxent* (T-AO 201), No homeport  
*USNS Yukon* (T-AO 202), No homeport  
*USNS Laramie* (T-AO 203), No homeport  
*USNS Rappahannock* (T-AO 204), No homeport

Last Update: 22 August 2007



## U.S. Navy Fact Sheet

### Maritime Prepositioning Ships - T-AK, T-AKR and T-AOT

#### Description

The Navy's 14 Maritime Prepositioning Ships (MPS) are part of Military Sealift Command's Prepositioning Program. These ships preposition U.S. Marine Corps vehicles, equipment and ammunition throughout the world.

#### Features

The MPS are assigned to three Maritime Prepositioning Ship squadrons located in the Mediterranean, the Indian Ocean at Diego Garcia and the Western Pacific at Guam and Saipan. The MPS ships in each squadron have sufficient equipment, supplies and ammunition to support a Marine Expeditionary Brigade of about 17,000 personnel for 30 days. The MPS ships are self-sustaining, having cranes which enable them to unload their own cargo. Beginning in 2000 with the delivery of *USNS 1st Lt. Harry L. Martin*, three additional ships were added to the Maritime Prepositioning Force, adding the capacity to carry expeditionary airfields, Seabee construction equipment and field hospital cargo.

#### Background

The *Sgt. Matej Kocak*-class was converted before entering service with MSC. The ships gained 157 feet amidships and a helicopter landing platform after conversion. These ships, delivered to MSC in the mid-1980s, are National Steel and Shipbuilding, San Diego, conversion ships owned and operated by Waterman Steamship Corp.

*USNS 2nd Lt. John P. Bobo*-class ships are new construction ships delivered to MSC in the mid-1980s from General Dynamics, Quincy, Mass. In January 2006, MSC purchased *MV 1st Lt. Jack Lummis*, *MV 1st Lt. Baldomero Lopez* and *MV Pfc. Dewayne T. Williams*. *MV 2nd Lt. John P. Bobo* was purchased in January 2007. *SS Sgt. Matej Kocak*, *SS Maj. Stephen W. Pless* and *MC Sgt. William R. Button* were purchased January 2009.

*USNS 1st Lt. Harry L. Martin* was modified in 1999 and delivered to MSC in 2000.

*USNS Gunnery Sgt. Fred W. Stockham* (ex-Soderman) was modified in 2000 and delivered to MSC in 2001.

*USNS Lance Cpl. Roy M. Wheat* began modifications in 1999, including a 118-foot mid-body insertion plug and was delivered to MSC in 2003.

*USNS Dahl*, a large, medium, speed, roll-on/roll-off ship, moved into the Maritime Prepositioning Ships fleet April 1, 2009, from another part of the Prepositioning Program.

Government-owned tanker *USNS Lawrence H. Gianella* began serving the Prepositioning Program July 1, 2009. It was formerly in Military Sealift Command's Sealift Program.

**Point Of Contact**

Office of Public Affairs  
 Military Sealift Command  
 Washington, DC 20398-5540  
 (202) 685-5055

**General Characteristics, Sgt. Matej Kocak Class**

**Builder:** Pennsylvania SB Company, Chester, PA.  
**Propulsion:** 2 boilers; 2 GE turbines; 30,000 hp; 1 shaft.  
**Length:** 821 feet (250.41 meters).  
**Beam:** 105.6 feet (32.21 meters).  
**Displacement:** 48,754 tons(49,534.06 metric tons) full load.  
**Speed:** 20 knots (23.02 mph).  
**Crew:** 34 civilians, 10 technicians.  
**Load:** Containers, 532; ro-ro, 152,236 square feet; JP-5 bbls, 20,290; DF-2 bbls, 12,355; Mogas bbls, 3,717; stable water, 2,189; cranes, 2 twin 50 ton and 1-30 ton gantry.  
**Aircraft:** Helicopter platform only.  
**Ships:**  
*USNS Sgt. Matej Kocak* (T-AK 3005), No homeport - formerly the *SS John B. Waterman*  
*SS PFC Eugene A. Obregon* (T-AK 3006), No homeport - formerly the *SS Thomas Heywood*  
*USNS Maj. Stephen W. Pless* (T-AK 3007), No homeport - formerly the *SS Charles Carroll*

**General Characteristics, 2nd Lt. John P. Bobo Class**

**Builder:** General Dynamics, Quincy.  
**Propulsion:** 2 Stork-Wartsilia Werkspoor 16TM410 diesels; 27,000 hp sustained; 1 shaft, bow thruster; 1,000 hp.  
**Length:** 675.2 feet (205.94 meters).  
**Beam:** 105.5 feet (32.18 meters).  
**Displacement:** 44,330 tons (45,039.28 metric tons) full load.  
**Speed:** 18 knots (20.71 mph).  
**Crew:** 38 civilians, 10 technicians.  
**Load:** Containers, 530; ro-ro, 152,185 square feet; JP-5 bbls, 20,776; DF-2 bbls, 13,334; Mogas bbls, 4,880; stable water, 2,357; cranes, 1 single and 2 twin 39 ton.  
**Aircraft:** Helicopter platform only.  
**Ships:**  
*USNS 2nd Lt. John P. Bobo* (T-AK 3008), No homeport  
*USNS PFC Dewayne T. Williams* (T-AK 3009), No homeport  
*USNS 1st Lt. Baldomero Lopez* (T-AK 3010), No homeport  
*USNS 1st Lt. Jack Lummus* (T-AK 3011), No homeport  
*USNS Sgt. William R. Button* (T-AK 3012), No homeport

**General Characteristics, 1st Lt. Harry L. Martin Class**

**Builder:** Bremer Vulkan shipyard, Bremen, Germany.  
**Propulsion:** 1 two-stroke Burmeister & Wain type K7SZ90/160 BL; Max 21,000 hp; 1 shaft; bow and stern thrusters.  
**Length:** 754 feet (229.97 meters).  
**Beam:** 106 feet (32.33 meters).  
**Displacement:** 33,600 long tons (34,137.6 metric tons) on 36'0" summer salt water draft.  
**Speed:** 18 knots (20.71 mph).  
**Crew:** 27 civilians, 12 military technicians.  
**Ships:**  
*USNS 1st Lt. Harry L. Martin* (T-AK 3015), No homeport - formerly the *MV Tarago*

**General Characteristics, Gunnery Sgt. Fred W. Stockham Class**

**Builder:** Odsene Shipyard, Denmark.  
**Propulsion:** 1 two-stroke Burmeister & Wain low-speed Diesel; 12L90GFCA; 12 cylinder; 46,653 bhp @ 97 rpm; 1 shaft; bow thruster.  
**Length:** 907 feet (276.64 meters).  
**Beam:** 106 feet (32.33 meters).  
**Displacement:** 55,123 long tons (56,004.97 metric tons) full load.  
**Speed:** 24 knots (27.62 mph).  
**Crew:** 28 civilians, 12 military technicians.  
**Ships:**

*USNS Gunnery Sgt. Fred W. Stockham* (T-AK 3017), No homeport - formerly the *USNS Soderman* (T-AKR 299) formerly the *MV Lica Maersk*

**General Characteristics, Lance Cpl. Roy M. Wheat Class**

**Builder:** Chernomorskiy Sudostroitelny Zavol; Nikolayev, Ukraine.

**Propulsion:** COGAS (turbines), 2GTE DT59 Zorya, 2 shafts; bow and stern thrusters.

**Length:** 864 feet (263.52 meters).

**Beam:** 99 feet (30.20 meters).

**Displacement:** 50,570 long tons (51,379.12 metric tons) full load.

**Speed:** 20 knots (23.02 mph).

**Crew:** 31 civilians, 12 military technicians.

**Ships:**

*USNS Lance Cpl. Roy M. Wheat* (T-AK 3016), No homeport - formerly the *GTS Bazaliya*

**General Characteristics, Watson Class**

**Builder:** National Steel and Shipbuilding Co.

**Propulsion:** 2GE Marine LM gas turbines; 64,000 hp (7.7MW); 2 shafts, cp props

**Length:** 951.4 feet (290.18 meters)

**Beam:** 106 feet (32.33 meters)

**Displacement:** 62,968 tons (63,975.49 metric tons) full load

**Speed:** 24 knots (27.62 mph)

**Crew:** 26 civilian crew (up to 45); up to 50 active duty

**Load:** 393,000 sq.ft. cargo space

**Homeport:** No homeport assigned

**Ships:**

*USNS Sisler* (T-AKR 311)

*USNS Dahl* (T-AKR 312)

*USNS Dahl* (T-AKR 312)

**General Characteristics, Government-owned tanker**

**Length:** 615 Feet

**Beam:** 90 Feet

**Displacement:** 39,624 Tons

**Draft:** 36 Feet

**Speed:** 16 Knots

**Crew:** 24 contract mariners

**Ships:**

*USNS Lawrence H. Gianella* > (T-AOT 1125)

*USNS Lawrence H. Gianella* (T-AOT 1125)

*USNS Lawrence H. Gianella* > (T0AOT 1125)

Last Update: 24 August 2009



## U.S. Navy Fact Sheet

### Dry Cargo/Ammunition Ships - T-AKE

#### Description

The dry cargo/ammunition ships are operated by the Navy's Military Sealift Command. In this class of an expected 14 ships, 11 are slated to provide multi-product combat logistics support to the Navy fleet and three are slated to preposition U.S. Marine Corps Cargo at sea as part of the Maritime Prepositioning Force.

The Navy's 10 operational T-AKEs are currently conducting Combat Logistics Force (CLF) missions.

As the Navy's newest CLF underway replenishment ships, the T-AKEs will replace the current capability of the *Kilauea-class* (T-AE 26) ammunition ships; *Mars-class* (T-AFS 1) combat stores ships; and, when operating in concert with a *Henry J. Kaiser-class* (T-AO 187) fleet replenishment oiler, the *Sacramento-class* (AOE 1) fast combat support ships. The T-AKE acquisition program calls for up to 14 ships and has a budget of more than \$6 billion. The T-AKE acquisition program resides within the Navy's Program Executive Office, Ships - Support Ships Boats and Craft Program Office (PEO Ships/PMS 325).

#### Features

As auxiliary support ships, T-AKEs directly contribute to the ability of the Navy to maintain a forward presence. In their primary mission role, the T-AKEs provide logistic lift to deliver cargo (ammunition, food limited quantities of fuel, repair parts and ship store items) to U.S. and allied ships at sea. In their secondary mission, the T-AKEs may be required to operate in concert with a *Henry J. Kaiser-class* (T-AO 187) fleet replenishment oiler as a substitute station ship to provide direct logistics support to the ships within a carrier strike group.

#### Background

The primary goal of the T-AKE program is to provide effective fleet underway replenishment capability at the lowest life cycle cost. To meet that goal, the ships are designed and constructed to commercial specifications & standards and certified/classed by the American Bureau of Shipping, United States Coast Guard, and other regulatory bodies. All are operated by the U.S. Navy's Military Sealift Command. They are being built in San Diego by General Dynamics, NASSCO.

#### Point Of Contact

Public Affairs Office  
Military Sealift Command  
914 Charles Morris Court, SE  
Washington, DC 20398  
(202) 685 5055  
<http://www.msc.navy.mil>

Corporate Communications Office  
Naval Sea Systems Command (SEA 000)  
1333 Isaac Hull Ave., SE  
Washington, DC 20376  
<http://www.navsea.navy.mil>

#### General Characteristics

**Ships:**

*USNS Lewis and Clark* (T-AKE 1), No homeport - Delivered June 20, 2006  
*USNS Charles Drew* (T-AKE 10), No homeport - Delivered July 14, 2010  
*Washington Chambers* (T-AKE 11), No homeport - Delivered Feb. 23, 2011  
*William McLean* (T-AKE 12), No homeport - Construction began Fall 2009  
*USNS Sacagawea* (T-AKE 2), No homeport - Delivered Feb. 27, 2007  
*Charles Drew* (T-AKE 10) - under construction  
*Washington Chambers* (T-AKE 11) - under construction  
*William McLean* (T-AKE 12) - under construction  
*USNS Alan Shepard* (T-AKE 3), No homeport - Delivered June 26, 2007  
*USNS Richard E. Byrd* (T-AKE 4), No homeport - Delivered Jan. 8, 2008  
*USNS Robert E. Peary* (T-AKE 5), No homeport - Delivered June 5, 2008  
*USNS Amelia Earhart* (T-AKE 6), No homeport - Delivered Oct. 30, 2008  
*USNS Carl Brashear* (T-AKE 7), No homeport - Delivered March 4, 2009  
*Wally Schirra* (T-AKE 8) - under construction  
*Wally Schirra* (T-AKE 8), no homeport - under construction  
*USNS Wally Schirra* (T-AKE 8), No homeport - Delivered Sept. 1, 2009  
*Matthew C. Perry* (T-AKE 9), No homeport - Delivered Feb. 24, 2010  
*Matthew C. Perry* (T-AKE 9) - under construction

Last Update: 11 April 2011



## U.S. Navy Fact Sheet

### Aviation Logistics Support Ships - T-AVB

#### Description

Two aviation logistics support ships are assigned to the Military Sealift Command Prepositioning Program. They carry aviation maintenance equipment in support of U.S. Marine Corps fixed and rotary wing aircraft.

#### Features

*SS Wright* and *SS Curtiss* are outfitted with both a stern ramp and side ports. Their roll-on/roll-off deck runs the complete length of the ship. When outfitted with mobile facilities, the ships can service aircraft while anchored offshore.

#### Background

*SS Wright* and *SS Curtiss* are U.S. Maritime Administration ships permanently assigned to Military Sealift Command's Prepositioning Program to enhance the U.S. Marine Corps' aviation maintenance support ability. The ships normally are kept in reduced operating status with a cadre crew aboard. *SS Wright* and *SS Curtiss* were converted by Todd Shipyards of Galveston, Texas in 1986 and 1987, respectively.

#### Point Of Contact

Office of Public Affairs  
[Military Sealift Command](#)  
 Washington, DC 20398-5540  
 (202) 685-5055

#### General Characteristics, *Wright Class*

**Builder:** Todd Shipyards, Galveston, TX.

**Propulsion:** 2 combustion engineering boilers; 2 GE turbines; 30,000 hp; 1 shaft.

**Length:** 602 feet (183.61 meters).

**Beam:** 90.2 feet (27.51 meters).

**Displacement:** 23,872 tons (24,254 metric tons) full load; 11,757 dead weight tons.

**Speed:** 19 knots (21.87 mph).

**Crew:** 37 crew and 1 Aircraft Maintenance Detachment totaling 362 men.

#### Ships:

*SS Wright* (T-AVB 3), No homeport - formerly the *SS Young America*

*SS Curtiss* (T-AVB 4), No homeport - formerly the *SS Great Republic*

Last Update: 22 January 2008

## MV-22B Osprey Fact File



**Description:** The MV-22 Osprey is a multi-engine, dual-piloted, self-deployable, medium lift, vertical takeoff and landing (VTOL) tilt-rotor aircraft designed for combat, combat support, combat service support, and Special Operations missions worldwide. The MV-22 combines the functionality of a helicopter with the long-range, high-speed cruise performance of a turboprop aircraft. It is built with composite materials, has fly-by-wire light controls and digital cockpits.

**Primary Function:** Assault transport of troops, equipment, and supplies from assault ships.

**Mission:** Marine Corps Assault Support

**Armament:** 1x 7.62mm M240 MMG or .50 cal M2 HMG ramp mounted  
1x 7.62mm GAU-17 minigun belly mounted

**Dimensions (Spread):** 57'4" x 84'7" x 22'7"

**Dimensions (Folded):** 63'0" x 18'5" x 8'3"

**Vertical Takeoff/Landing (VTOL) Weight:** 52,600 lbs

**Short Takeoff/Landing (STOL) Weight:** 57,000 lbs

**Self-Deploy (STO) Weight:** 60,500 lbs

**Mission Range:** Amphibious Pre-Assault Raid 200 nm

**Amphibious External Lift:** 10,000 lb load 50 nm

**Land Assault External Lift:** 50 nm

**Troop Seating:** 24 Combat Loaded Marines

**Self-Deployment:** 2100 nm

**Cruise Airspeed:** 240 kts (MV-22) / 230 kts (CV-22)

**Aerial Refueling Capable and Shipboard Compatible:** Yes

**Initial Operational Capability:** 2007

**Manufacturer:** Bell Boeing

## AV-8B Harrier Fact File



**Description:** The AV-8B Harrier II Plus is a multi-mission, short-takeoff vertical landing (STOVL) tactical strike aircraft. Because of its short-to-vertical takeoff and landing characteristics, it possesses basing flexibility that is unmatched by other fixed-wing aircraft. Furthermore, it supports a broad selection of air-to-air and air-to-surface weapon systems and third-generation technologies that address diverse tactical scenarios.

**Primary Function:** Attack and destroy surface targets under day and night visual conditions

**Mission:** Close Air Support, Combat Air Patrol, DAS/SCAR

**Armament:** Seven external store stations, comprising six wing stations for AIM-9 Sidewinder and an assortment of air-to-ground weapons, external fuel tanks and AGM-65 Maverick missiles; one centerline station for DECM pod or air-to-ground ordnance. A GAU-12 25MM six-barrel gun pod can be mounted on the centerline and has a 300 round capacity with a lead computing optical sight system (LCOSS) gunsight.

**Dimensions:** 30'4" x 46'4" x 11'8"

**Vertical Takeoff/Landing (VTOL) Weight:** 18,900 lbs

**Short Takeoff/Landing (STOL) Weight:** 31,000 lbs

**Self-Deploy (STO) Weight:** 60,500 lbs

**Ferry Range:** 2,100 nm

**Combat Radius:** 163 NM (CAS), 454 NM (Interdiction)

**Cruise Airspeed:** Subsonic

**Crew size:** 1

**Aerial Refueling Capable and Shipboard Compatible:** Yes

**Initial Operational Capability:** 1985

**Manufacturer:** McDonnell Douglas

## AAV-7A1 - Amphibious Assault Vehicle



**Description:** The Amphibious Assault vehicle is an assault amphibious full-tracked landing vehicle. The AAV-7A1 is the current amphibious troop transport of the United States Marine Corps. It is used by USMC Assault Amphibian Battalions to land the surface assault elements of the landing force and their equipment in a single lift from assault shipping during amphibious operations to inland objectives and to conduct mechanized operations and related combat support in subsequent mechanized operations ashore. It is also operated by other forces. Marines call them "Amtracks".

Variant	AAVC7A1 (C2)	AAVP7A1 (Personnel)	AAVR7A1 (Recovery)
<b>Manufacturer</b>	FMC Corporation		
<b>Crew</b>	3		5
<b>Weight (empty w/ EAAK)</b>	46,314 lbs	56,743 lbs	50,113 lbs
<b>Combat load</b>	50,758 lbs	60,758 lbs	52,123 lbs
<b>Fuel Capacity</b>	171 Gallons	171 Gallons	171 Gallons
<b>Range and speed on land</b>	300 miles @ 25 mph		
<b>Range and speed on water</b>	7 hours @ 5 knots		
<b>Engine</b>	Cummins VT400 4 Cycle, 8 Cylinder, 90' Vee, Water Cooled, Turbo-charged Engine		
<b>Armament</b>	M240G 7.62 MMG	M2 Caliber .50 HMG and MK 19 40mm Grenade Launcher	M240G 7.62 MMG
<b>Cargo Capacity</b>	5 radio operator stations 3 staff stations 2 master stations.	21 Combat Loaded Marines	Recovery Equipment: Generator: 120 VAC Air Compressor: 145 PSIG to 175 PSIG Hydraulic Crane: 6000 lbs Capacity Crane Winch: 23,000 lbs Breaking Strength/ Length 85 Feet

## CH-53E Super Stallion Fact File



**Description:** The CH-53E Super Stallion is designed for the transportation of equipment, supplies and personnel during the assault phase of an amphibious operation and subsequent operations ashore. Capable of both internal and external transport of supplies, the CH-53E is capable of operation in adverse weather conditions both day and night. The CH-53E is now filling a role in the Marine Corps' medium lift helicopter fleet.

**Primary Function:** Transportation of heavy equipment and supplies during the ship-to-shore movement of an amphibious assault and during subsequent operations ashore.

**Mission:** Marine Corps Assault Support

**Armament:** Two GAU-21/A .50 caliber machineguns

**Dimensions:** 99'5" x 79' (rotor diameter) x 28'4"

**Range:** 621nm (indefinite with refueling)

**Internal Load:** 69,750 lbs

**External Load:** 73,500 lbs

**Troop Seating:** 37 Combat Loaded Marines

**Crew:** 6

**Cruise Airspeed:** 150 kts

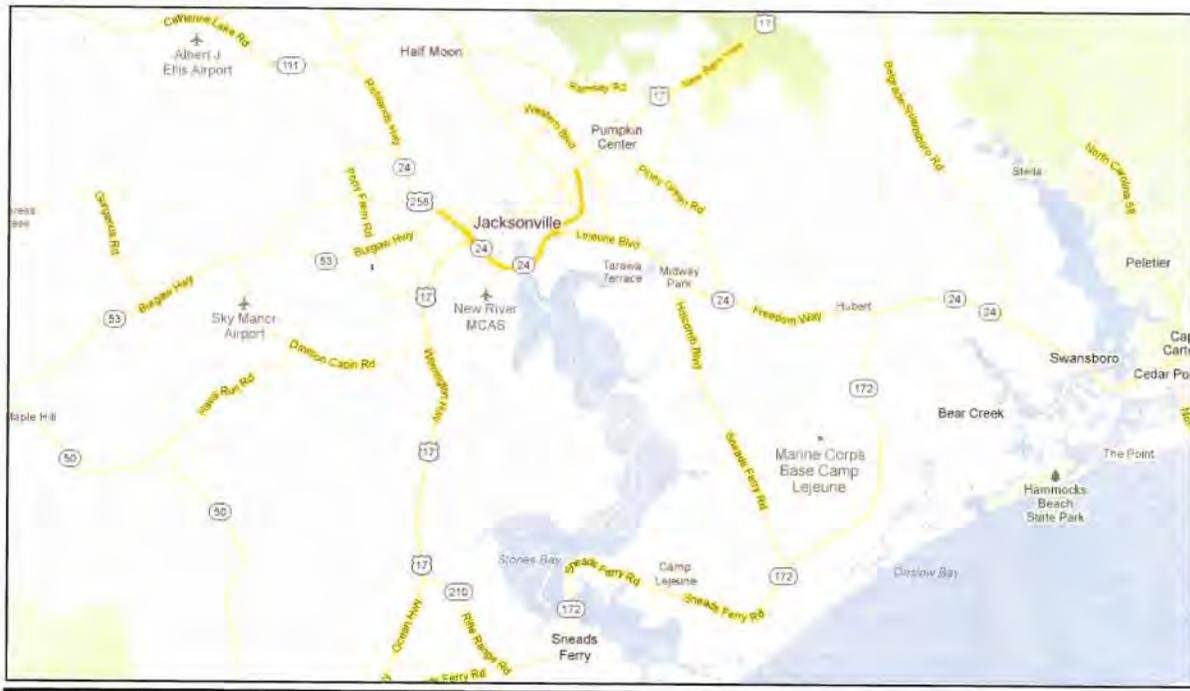
**Aerial Refueling Capable and Shipboard Compatible:** Yes

**Initial Operational Capability:** 1981

**Manufacturer:** Sikorsky Aircraft



# Jacksonville, North Carolina



## Camp Lejeune

