

Amphibious Assault Ships - LHD/LHA(R)

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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 capable of sailing in harm's way and enable rapid combat power buildup 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.

LHAs are the largest of all amphibious warfare ships, resembling a small aircraft carrier. They are 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. LHA Flight 0 will enhance Marine Corp aviation with greater maintenance capability and JP-5 fuel capacity in lieu of a well deck. LHA Flight 1 will reincorporate a well deck to enhance expeditionary war fighting capabilities while maintaining the principal aviation characteristics of the Flight 0.

Features

Modern U.S. Navy Amphibious Assault Ships project power and maintain presence by serving as the cornerstone of the amphibious ready group (ARG) or expeditionary strike group (ESG). 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 America-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. 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, LHDs were used to transport thousands of Marines and their equipment to Iraq and Afghanistan for combat operations. 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.

The USS America (LHA 6) class ships replace the original five Tarawa-class LHAs, which have all been decommissioned. USS America (LHA 6), along with the future USS Tripoli (LHA 7) are LHD variants optimized for aviation capability. America-class ships are 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.

The propulsion plant and electrical distribution and auxiliary systems designed and built for USS Makin

Island (LHD 8) are also used aboard USS America class ships. USS America (LHA 6) was delivered to the U.S. Navy on April 10, 2014. USS Tripoli (LHA 7) commissioned on July, 15, 2020, while Bougainville (LHA 8) is currently under construction at Huntington Ingalls Industries (HII) in Pascagoula, Mississippi and is expected to join the fleet in 2024. LHA 6 and LHA 7, commonly referred to as Flight 0 ships, contain key differences from the LHD class to 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. LHA 8 will be the first Flight 1 ship, reincorporating a well deck to enhance expeditionary war fighting capabilities while maintaining the principal aviation characteristics of the Flight 0 via a reduced island.

Background

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, Virginia. The delivery of LHA Replacement or LHA(R) America-class ships is the next step in the incremental development of the "Big Deck Amphib."

Program Status

LHDs 1-8 and LHAs 6-7 are in service. The future USS Bougainville (LHA 8) started fabrication in October 2018.

General Characteristics, America Class LHA(R) Flight 0 Builder: Huntington Ingalls Industries Inc., Ingalls Operations, Pascagoula, Mississippi

Date Deployed: July 7, 2017 (USS America)

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

Length: 855 feet (260.7 meters)

Beam: 106 feet (32.3 meters)

Displacement: Approximately 43,745 long tons full load (44,449 metric tons)

Speed: 20+ knots.

Crew: 1204 (102 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 Sea Hawk helicopter

Ships:

[USS America \(LHA 6\)](#), San Diego, California

[USS Tripoli \(LHA 7\)](#), San Diego, California

General Characteristics, Wasp Class Builder: Northrop Grumman Ship Systems Ingalls Operations, Pascagoula, Mississippi

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 20 mm 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) and F-35B Joint Strike Fighters (JSF) STOVL aircraft)

Landing/Attack Craft: 3 LCACs or 2 LCUs

Ships:

[USS Wasp \(LHD 1\)](#), Norfolk, Virginia

[USS Essex \(LHD 2\)](#), San Diego, California

[USS Kearsarge \(LHD 3\)](#), Norfolk, Virginia

[USS Boxer \(LHD 4\)](#), San Diego, California

[USS Bataan \(LHD 5\)](#), Norfolk, Virginia

[USS Iwo Jima \(LHD 7\)](#), Norfolk, Virginia

[USS Makin Island \(LHD 8\)](#), San Diego, California

General Characteristics, America Class LHA(R) Flight 1 Builder: Huntington Ingalls Industries Inc., Ingalls Operations, Pascagoula, Mississippi

Propulsion: Two marine gas turbines, two shafts, 59,000 total brake horsepower, two 5,000 horsepower auxiliary propulsion motors.

Length: 855 feet (260.7 meters).

Beam: 106 feet (32.3 meters).

Displacement: Approximately 43,335 long tons full load (44,030 metric tons).

Speed: 20+ knots.

Crew: 1204 (102 officers)

Load: 1462 (150 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 Sea Hawk helicopters.

Landing/Attack Craft: A mix of: Landing Craft, Air Cushion (LCAC) and Landing Craft Utility (LCU)

Ships: Bougainville (LHA 8) - under construction Unnamed (LHA 9) - anticipated contract award FY24