

Ever Present-Enabling U.S. Indo-Pacific Strategy Success

The Light Amphibious Warship (LAW) is the solution for providing tactical maneuver to naval expeditionary forces achieving 21st century Indo-Pacific presence against the threat of a growing Chinese Fleet

by CDR Patrick L. German

Here is the question: how can a budget constrained Navy and Marine Corps achieve the goals and objectives of the National Defense Strategy advocating a “Free and Open Indo-Pacific” against China, a modernized and more numerous peer adversary in their own backyard? The DOD recently released its “Military and Security Developments Involving the People’s Republic of China 2020,” which revealed that the People’s Republic of China has surpassed the U.S. Navy as the largest navy in the world with an overall battleforce of approximately 350 ships, compared to the U.S. Navy’s battle force of approximately 300 ships. Additionally, in the Pentagon’s annual report to Congress, the DOD reported: “The majority of the People’s Liberation Army Navy (PLAN) fleet is made up of ‘modern multi-role platforms’ that host anti-ship, anti-air and anti-submarine weapons and sensors.”¹ Meanwhile, the U.S. Navy has been hampered in the introduction of relevant new capabilities by funding delays, extended maintenance periods, late deliveries, and cost growth from maintaining an aging fleet that is pressurized by recapitalizing our ballistic missile submarine deterrent.

To prepare for the challenges ahead, the U.S. military is vigorously re-thinking, refocusing, and testing future Navy and Marine Corps force designs and warfighting concepts to include Dis-

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tributed Maritime Operations, Expeditionary Advanced Base Operations, and Littoral Operations in a Contested Environment to better understand what platforms and capabilities are required now and in the future. With the United States Indo-Pacific Command Area of Responsibility (USINDOPACOM

AOR) presenting a serious distance problem, all the aforementioned concepts unsurprisingly demand a greater forward-based presence of U.S. forces with increased capacity and capability that can operate, maneuver, fight, and win. For the Navy and Marine Corps, part of the innovative and enabling solu-



The Light Amphibious Warship is planned as a more “risk worthy” platform distinct from the Littoral Combat Ship (pictured). (Photo by Chief Petty Officer Shannon Renfro.)

tion was inspired by the manufacturing and operational success of the World War II-era Landing Ship Medium class of beachable transports and weapons platforms.² The new *Light Amphibious Warship (LAW)* is the 21st century upgrade that will be a beachable ship with intra-theater endurance whose main mission is to operate organically, providing shore-to-shore maneuver in direct support of the newly-formed Marine Littoral Regiments (MLR). The LAW will be able to operate independently or in concert with other surface ships, other LAWs, joint task forces, and coalition forces in contested environments in support of DMO/LOCE/EABO across the competition-conflict spectrum. It will be both capable and an economically built, forward deployed amphibious warship operating across the USINDOPACOM AOR. It will provide an additional “ever present” U.S. force posture in the face of expanding Chinese influence and potential conflict.

Introducing the LAW: The New version of the Landing Ship Medium (LSM)

The Navy and Marine Corps have identified platform and system development descriptions through a variety of capability and requirements scoping activities. The LAW is envisioned as relatively economic, beachable, amphibious warfare ship that is tailored to provide distributed amphibious maneuver, mobility, and logistics to the MLR for beach access. This new ship class will be designed and produced as effective transportation for landing forces, cargo, and munitions while being cost-efficient. The LAW is a warship because of its combat capability, crewing, mission set, and landing forces and will not be an asset of Transportation Command nor is it a replacement for the traditional L-class ships; it is a shore-to-shore capability, not a ship-to-shore capability. At present, the intention is to develop a LAW production design that can be built either in its entirety or in modular sections at both Tier I and Tier II shipyards. Modern landing ship design and production engineering and assembly allows the Navy and industry

Attribute	Light Amphibious Warship (LAW) Target Range
Operations Support Target	<ul style="list-style-type: none"> • Global Maritime Partnerships and Security Cooperation Operations • Distributed Maritime Operations (DMO) • Logistics Operations (LOG); Expeditionary Advanced Base Operations (EABO) • Amphibious Warfare, Training and Exercise Operations • Expeditionary Warfare, Training and Exercise Operations • Intra-Theater Deployment and Employment Operations • Humanitarian Assistance/Disaster Response (HA/DR) • Noncombatant Evacuation Operations (NEO) • Support to Search and Rescue (SAR) and Recovery Operations • Support of Land and Maritime Prepositioned Force Operations
Size Target	200 feet to 400 feet
Speed Target	14 knots to 22+ knots
Range Target	3500NM to 6,500NM
Crew Size Target	Crew size determination requires a detailed vessel crewing study based on LAW size, tonnage, simultaneous operations, functions, tasks and expectations for organizational, intermediate, and select depot level on-board maintenance. This is a critical component for future design in order to avoid under-estimation or assumption errors in crew sizing made during the development of the Littoral Combat Ship (LCS).
Embarked Force Size Target	TBD (125) person naval expeditionary detachment or battle-group with TBD mission essential equipment, weaponry, supplies, and (8000) to (12000) square feet in cargo storage capacity for (11) to (21) days of transit.
Underway Replenishment Target	Vertical Replenishment (VERTREP) capable. The LAW will be capable of alongside Underway Replenishment & cargo transfer from Next Generation Logistics Ships (NGLS) and Combat Logistic Force (CLF) vessels to resupply its organic fuel tanks as well as retail distribution tanks to support embarked forces.
C4ISR Target	Networked common operational picture information sharing command, control, communication, computer, intelligence, surveillance and reconnaissance capabilities coupled with the ability to launch, operate, recover and sustain, when required, autonomous aerial, surface and underwater vehicles.
Self-Defense Target	(2) X 30mm Anti-Surface Gun Weapons Systems and space, weight, power, cooling, connectivity and location/placement designs for TBD future electronic warfare, decoy, and other self-defense systems for the contested combat environment.
Operational Availability (Ao) Target	(0.8)/(80%) Daily
Initial Program Objective Target	(35) U.S. Vessels

Table 1.

to use the total shipbuilding capacity of the Nation and more rapidly produce and deliver these new ships at economic price and on an expedited timeline.

As a globally forward-deployed based warship, the LAW will be designed with performance target ranges listed within

Table 1.³ The first LAW is currently targeted for delivery as early as Fiscal Year 2028. The total LAW program acquisition objective can easily be expanded beyond 35 vessels to establish similar LAW amphibious task groups in other competitive regions and to ac-

commodate any foreign military sales by interested allies and partner nations.

The Return on Investment for LAW and “Expanding American Presence and Deterrence”

A modernized and more traditional Naval Battle Fleet and FMF, in numbers sufficient to counter China and Russia from a forward deployed posture, is desirable but not *affordable* currently with the potential for defense budgets to flatten in the years to come.⁴ Current Navy/Marine Corps integrated presence in the 7th Fleet AOR is based on a mix of regional and rotational deployed Amphibious Ready Groups (ARG) and MEU based in Japan and CONUS. This ARG-MEU team—built around a three (3) Ship-amphibious warfare/L-Class ship mix, with well

and capabilities, it seems logical that a confrontation could occur on the high seas as well as in and around the littorals, and in isolated and austere environments.⁶ This challenge falls to the Navy, Marine Corps, and our partners and allies. LAW is being fielded as quickly as possible increasing the number of forward deployed platforms that will provide organic maneuver to the MLR across the competition continuum. In this way, LAW will have the ability to operate independently or to complement the forward and rotational ARG-MEU forces in the USINDOPACOM AOR.

The primary concept would be to divide the thirty-five LAWs into three separate Navy task groups of nine to twelve LAWs each and co-located and aligned in direct support of one of the

with one regiment equivalent forward operating, one preparing for the next deployment and one returned, resting, refitting, and retraining for a future rotational deployment timeframe. This equates to one regiment deployed and two regiments in garrison in progressive states of the deployment cycle.

The increased capacity of the LAW enhances expeditionary force movement and dispersion, which creates an advantage for U.S. forces while creating uncertainty for potential adversary forces. The combination of traditional rotational ARG-MEU deployments plus high numbers of Navy LAWs with naval expeditionary forces provide a persistent and forward deployed capability that demonstrates American naval forces are ready, capable, and relevant across the entire USINDOPACOM AOR. Achieving an ever-present posture is made possible not only through investment in the LAW but also through future increased support infrastructure across designated forward-deployed sites that are co-located with Marine and Navy Expeditionary Forces throughout the vast Indo-Pacific region.

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decks and organic displacement and non-displacement landing craft—provides most of the regional engagement. An additional ARG-MEU on a rotational basis is maintained, trained, sustained, and provided by 3rd Fleet. When on cycle, these two ARG MEUs provide a presence of 6–7 L-Class ships and 5000 Marines across the largest combatant command AOR. Prior to the increased *presence and influence* of China in the region, the ARG-MEU construct may have already seemed to be insufficient to meet the challenges of USINDOPACOM requirements.⁵ Though American fleet and amphibious expeditionary forces are powerful, capable, active, and present, they are still considerably overtasked relative to the numerous operational demands of the Indo-Pacific region.

To counter the challenges that China presents, there is an undeniable need for greater forward based naval and particularly naval amphibious force presence in both capability and capacity. As the Chinese and Russia militaries expand in their capacity

three Marine Littoral Regiments (MLR) of the III MEF as they are positioned throughout the Indo-Pacific region. With increased and additive capacity, these new ships would support 7th Fleet and FMF/ III MEF in their daily conduct of disaggregated or aggregated military engagement, security cooperation and training, deterrence, and humanitarian crisis response operations throughout the breadth and depth of the USINDOPACOM region. There are other potential operational concepts that can be built around the LAW. These Navy LAW Task Groups could be distributed and based throughout USINDOPACOM.

In peacetime, the ultimate co-location and distributed basing requires further study, but the advantage is clear. Preliminary analysis indicates nine direct support LAWs per MLR will provide sufficient maneuver to the MLR in support of EABO. Nine LAWs in support of each MLR in three different locations would potentially enable a MLR to maintain and sustain a 1:2 deployment to training ratio of MLR's

Towards A Family of LAW for U.S. and Allied Navies

One of the strongest features of the LAW's design will be its maneuverability and amphibious beach accessibility in support of the MLR. The ability to on and off-load tailored expeditionary forces and supplies over the beach without port or pier access is a peacetime and wartime survival advantage learned from combat experience with LSMs during World War II. LAW beach accessibility enables friendly forces to debark, distribute, and then further disperse to avoid and complicate adversary targeting and strikes—thus realizing the warfighting potential of expeditionary advance based operations. As a small beachable amphibious landing ship, when not in support of the MLR, the LAW is also envisioned and designed to be a host platform and vary its configuration to operate, support and sustain a variety of different mission or functional support forces, such as unmanned systems or Naval Special Warfare.



The Cyclone Class Patrol Craft could also compliment the Light Amphibious Warship in congested maritime terrain. (Photo by Petty Officer 3rd Class Janweb Lagazo.)

As we look at the possibility of a new family of landing ships, the truth is that multi-mission and multi-configurations add substantial costs. Cost constrained designs like the LAW are single mission configuration designs specifically tailored to their primary purpose, mission, and function. In this case, it is amphibious maneuver with beach accessibility.

Each landing ship derivative would require mission tailored equipment configurations and crewing appropriate for their mission and functional execution. However, these other mission possibilities, such as forward minelaying or Littoral Common Sub Radio Room and add comma after are not the primary operational and combat purpose of the LAW design. The LAW design is focused and configured for networked littoral mobility during peacetime and combat maneuver with fires within adversary targeting ranges during wartime. Though the LAW design will be able to contribute to forward logistical sustainment and other mission area operations, it is a direct support mobility asset for forward based naval expeditionary stand-in forces, not theater logistics, and will not be an asset of Transportation Command. As a result, existing designs such LCU-2000 or the future purpose-built next generation

logistic concept ship are optimized for general logistic and sustainment operations not for combat support of the Marine Littoral Regiment and Navy Expeditionary Forces in mobility and combat maneuver operations.⁷

... the LAW will provide an effective ... affordable forward based ... capacity

Summary

The LAW as a forward based and co-located medium landing ship will provide greater amphibious capacity which increases capability across the USINDOPACOM AOR. This will create a resource dilemma for the limited Chinese ISR resources. Since the LAWs are smaller intra-theater range ships, enabling employment of tailored units of action and ISR capabilities, they will be able to operate persistently in an always on the move distributed posture. This is a first step in obtaining U.S. naval forces “ever present posture” and a reminder to the region and China that

the United States and its naval forces are never too far to support its partners and allies in the INDOPACOM AOR. As an emerging Navy program initiative conceived by the Navy and Marine Corps Team, the LAW will provide an effective, highly capable, and affordable forward based maneuver and mobility capacity for the naval force and the imposition of complications for China’s planning calculus in the region.

Notes

1 Department of Defense, *Military and Security Developments Involving the People’s Republic of China* 2020, (Washington, DC: 2020).

2. Staff, “LSM Landing Ship Medium,” *GlobalSecurity*, (n.d.), available at <https://www.globalsecurity.org>; and Staff, “USS LSM-303,” *NavSource*, (n.d.), available at <https://www.navsource.org>.

3. Office of the Chief of Naval Operations, *OPNAV N953 Developmental System Concept of Operations (CONOPS) For Light Amphibious Warship (LAW)*, dated 2 December 2020 Version 5.1 (Washington, DC: Office of the Chief of Naval Operations, OPNAV N953, July 2020), 5–15, 18–25. (Washington, DC: July 2020).

4. Congressional Budget Office, *An Analysis of the Navy’s Fiscal Year 2020 Shipbuilding Plan*, (Washington, DC: October 2019); and Congressional Research Service, *CRS Report RL32665, Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress by Ronald O’Rourke*, (Washington, DC: September 2020).

5. U.S. Senate, *Statement of Admiral Philip S. Davidson, U.S. Navy Commander, U.S. Indo-Pacific Command Before The Senate Armed Services Committee On U.S. Indo-Pacific Command Posture, 12 February 2019*, (Washington, DC: February 2019).

6. Congressional Research Service, *CRS Report R43838, Renewed Great Power Competition: Implications for Defense—Issues for Congress*, (Washington, DC: October 2020).

7. Staff, “Landing Craft Utility,” *FAS Military Analysis Network*, (n.d.), available at <https://fas.org>.

