

Expeditionary Fast Transport Ship

A light amphibious warship stand-in capability

by Capt Robert Locker, Jr.

As the Marine Corps races toward a more littoral and distributed force structure, the need for a new amphibious platform is obvious. Ship-to-shore connectors capable of providing transportation, supplies, and logistical support are steadfast components of the *Commandant's Planning Guidance* and are required for the successful operation of expeditionary advanced base operations (EABO) and Marine Littoral Regiments (MLR). At the risk of theory running ahead of opportunity costs and force design, there are current Navy platforms that can be used as "stand in" Light Amphibious Warships (LAW) until the new vessel can be produced and fielded. The Expeditionary Fast Transport (EPF) can provide all or some of the capability of a LAW in order to test, experiment, and validate the MLR concept.

The LAW is intended to be one of the main ship-to-shore connectors that enable EABO and more specifically enable advanced seabase seizure through logistical support of MLRs. While MLRs have already been created, the LAW support vessel is far behind. The process of designing, manufacturing, and testing a naval vessel is long, and many vessels take longer than 25 years to go from drawing board to commissioning. The delay is further exacerbated by the quantity of 60 LAWs desired by the Marine Corps. A few articles claim that the first LAW will be delivered in six years; however, this would be a very aggressive production schedule and incredulously faster than the observed norm. The EPF provides similar capabilities now, until the LAW can be fielded, and can provide valuable insight to the design requirements.

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COTS Equipment

Possibly the largest advantage of the EPF is simply that the platform currently exists. It can currently fulfill the needs of a LCR without the need to immediately acquire another vehicle. The EPF can carry a company of Marines and has a configurable interior storage deck. It can support both personnel transportation and cargo/vehicle transportation for sustainment missions. The Marine Corps and Navy are currently soliciting ship designs; however, no contracts have been awarded, and no production has started, so using a current design as a stand in capability has many advantages.

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Marines are hopeful to receive the first LAW by 2026, whereas the EPF can currently provide company-level ship-to-shore connectors until the LAWs can matriculate into the fleet.

The EPF ships are currently owned by Naval Sea Lift Command, and they are generally used to ferry Marines and Sailors in between island chains, as the ship was originally designed. The LAW

is currently advertised to be outside of the traditional Amphibious Readiness Group (ARG), so that the LAW will be in direct support to the MLRs. The EPF is similarly not part of the Amphibious Readiness Group and is traditionally not included in the ARG. There are few other vessels capable of providing throughput to Marines in the littorals; however, the EPF is best situated for EABO environments. The next best hull design is the Frank S. Besson Class Logistics Support Vehicle, an army landing vehicle designed to land heavy machinery, such as Abram Tanks, onto beaches. While the Army's Logistics Support Vehicle has the capacity, the vessel's design is over 25-years old and is not as well suited toward accommodating personnel.

The initial production prices of the EPF was \$180 million per ship. While this is more expensive than the LAW cost requirement (see Table 1 on following page), the EPF ships have already been bought. The only costs associated with using existing EPF ships are the operational expenses to transport and man them. If the Marine Corps wanted more EPFs to bridge capabilities, than the vessel would be cheaper to produce than \$180 million. Economies of scale were not initially in favor of the EPF: only fourteen vessels were expected to be produced and only twelve were actually constructed. More EPF production would be expected to lower cost. Additionally, the producer of the EPF, Austal USA, has sold the EPF to militaries for a little as \$120 million. The original cost of the Hawaiian Superferry vessel that eventually was converted to become the USNS *Guam*, the first EPF commissioned, was \$88 million.

Similar Purpose

The necessities for a smaller, more maneuverable amphibious vessel is clear to support the mission set required by EABO. As smaller units become more distributed, there is a large gap left in between the American Class Amphibious ships and the current beach landing vessels. As the requirements to fill this gap are articulated, they continually point to an EPF-like capability. Both ships are intended for the littorals. Both ships are intended to have merchant vessel silhouettes. Both ships are intended to carry a company of Marines and their equipment. Both ships are meant to have “modest” armaments and communication suites. Both ships are meant to integrate in the EABO concept. Both ships exist outside of the ARG construct. The similarities between the vessels far exceed any differences. Table 1 illustrates how similar the specifications of the LAW concept and the EPF vessel are.

One stark difference between the LAW and the EPF is the LAW’s requirement to load and unload from the beach. The EPF cannot land directly on a beach; however, the ship’s platform does have many features to enable logistical support in less than industrial environments. Firstly, the EPF was designed load/unload on austere piers and quay walls commonly seen in developing countries. Improved port facilities are not required to unload, thus greatly increasing the EPF’s utilization. Secondly, the EPF has “roll-on, roll-off” capabilities. Vehicles loaded into the EPF can simply drive on and drive off the vessel similar to the LAW concept. Future design considerations could incorporate the “roll-on, roll-off” capabilities for larger vehicles such as MATVs and LVSRs. Thirdly, the EPF’s shallow draft negates the need for a deep water port. The EPF can access any port that small fishing vessels frequent, increasing its utilization in the Indo-Pacific region. While the EPF is not a 100 percent solution, it is an 85–90 percent solution that can be executed at a lower cost and faster rate.

Naval Cooperation

The LAW will be an impressive

	LAW Design Specification	Spearhead Class Specifications
Length	200-400 ft.	337 ft.
Draft	12 ft.	12-15 ft.
Range	3500 NM	1200 NM
Capacity	Infantry Company w/ Vehicles	321 Marines /700 short tons
Crew Size	60>	23-40 Sailors
Cost	100 Million>	180 Million Production
Armament	Self Defense	Self defense

Table 1. Comparison of forecasted LAW specifications and the EPF’s current specifications.

machine to build, as it has design requirements that are already difficult to achieve. If put into production, the LAW will be the largest beach landing vessel in the Navy, and the second largest in the DOD. These difficulties point to possible reluctance for our naval sister Service to carry the torch. The Marine Corps is asking the Navy to design, test, and build a ship from their blue navy dollars while both the Navy and Marine Corps are wrestling with their current budgets. If our bid for success is to rely on other Services to embrace the Marine Corps’ priorities such as the amphibious navy, than MLR’s support may be too slow to the fight.

By supporting the MLR with an EPF, the LAW’s efficacy can be evaluated before money is spent or allocated. Since the capabilities of the EPF are so similar to the LAW, using the EPF as a “stand in” LAW will be an effective method to evaluate and verify adequate requirements for the vessel’s concept before any decision space or opportunity cost is lost. The EPF can provide currently gapped capabilities while simultaneously helping design a better engineered and more deliberate LAW.

Conclusion

Marine Corps Warfighting Laboratory should conduct a study to determine how effective the EPF is at fulfilling the logistical requirements of MLRs. If the study is found conducive than force design advocates within Headquarters Marine Corps, Plans, Policy, and Operations; Marine Corps War-

fighting Laboratory; and FMF Command should work with their naval counterparts in order to field test the EPF through a series of exercises and after actions reports. The naval forces do not have to wait until the LAW ships are produced and fielded in order to compare their conceptual utility to their field efficacy.

EABO, the MLR, and other ideas based around distributed forces in a contested environment are mostly conceptual. These are warfighting predictions that are required to defeat U.S. pacing threats. The EPF is not the perfect light amphibious support ship for the Marine Corps, but it provides an opportunity to test and evaluate our MLR concepts right now. The EPF is a 90 percent solution currently available, where the LAW is at best six years and two Commandants away from the first ship being delivered. The vessel is already designed, produced, owned, staffed, and operated by the Navy. It only makes sense to use the equipment we currently own to fight in the present, prove concepts for the future, and better design forces to outperform near-peer adversaries.

