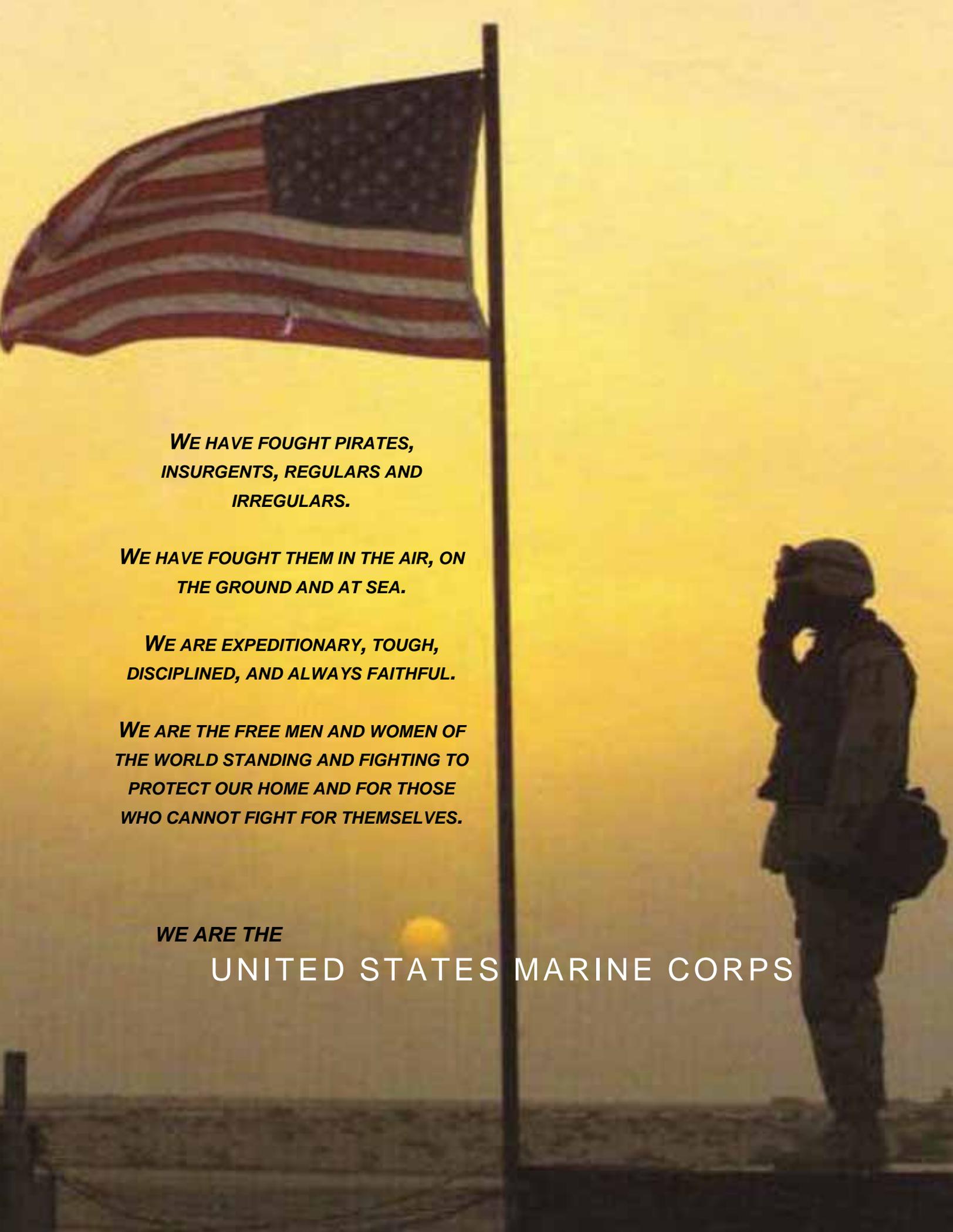




SEABASING REQUIRED CAPABILITIES



Annual Report 2013



***WE HAVE FOUGHT PIRATES,
INSURGENTS, REGULARS AND
IRREGULARS.***

***WE HAVE FOUGHT THEM IN THE AIR, ON
THE GROUND AND AT SEA.***

***WE ARE EXPEDITIONARY, TOUGH,
DISCIPLINED, AND ALWAYS FAITHFUL.***

***WE ARE THE FREE MEN AND WOMEN OF
THE WORLD STANDING AND FIGHTING TO
PROTECT OUR HOME AND FOR THOSE
WHO CANNOT FIGHT FOR THEMSELVES.***

WE ARE THE

UNITED STATES MARINE CORPS



A MESSAGE FROM THE DEPUTY COMMANDANT FOR COMBAT DEVELOPMENT AND INTEGRATION



SEABASING REQUIRED CAPABILITIES ANNUAL REPORT 2013 PROVIDES A STATUS UPDATE OF NECESSARY REQUIREMENTS TO ENABLE MARINE CORPS SEABASING CAPABILITIES. OUR CORPS CONTINUES TO SERVE AS THE NATION'S EXPEDITIONARY FORCE IN READINESS. WE OPERATE FORWARD DEPLOYED, TRAINING WITH PARTNERS AND ALLIES WHILE MAINTAINING A SHARP EDGE TO RESPOND TO CRISIS ANYWHERE IN THE GLOBAL LITTORALS. OUR BASES ARE AT SEA. MOBILE, VERSATILE, PRACTICAL, AND IF NECESSARY LETHAL, THESE PLATFORMS PROVIDE US AN ASYMMETRICAL ADVANTAGE TO COMBAT THE CHALLENGES ASSOCIATED WITH ANTI-ACCESS AND AREA DENIAL ENGAGEMENTS. WE ARE FULLY INTEGRATING THE EMERGING CAPABILITIES BROUGHT TO US BY THE T-AKE, MLP AND LMSR. WE ARE EXPLORING THE BEST METHODS TO FULLY LEVERAGE JHSV AND OTHER ALTERNATIVE PLATFORMS, AND WE WILL CONTINUE TO REFINE OUR AMPHIBIOUS WARFARE SUPERIORITY BY ADVOCATING FOR THE MODERNIZATION, DEVELOPMENT AND CONSTRUCTION OF SHIPS AND CRAFT. THIS ANNUAL REPORT PRESENTS OUR SEABASING REQUIRED CAPABILITIES FOR 2013.


K. J. GLUECK JR



21 OF THE WORLD'S 28 MEGA-CITIES LIE WITHIN 62 MILES OF A COASTLINE. PROTECTING OUR CITIZENS, ALLIES AND INTERESTS IN THIS GLOBAL SYSTEM IS NECESSARY FOR BOTH OUR PROSPERITY AND SECURITY.

THE ABILITY TO OPERATE SIMULTANEOUSLY AND SEAMLESSLY ON THE SEAS, ASHORE, IN THE AIR AND IN SPACE ALL WHILE OPERATING ACROSS THE RANGE OF MILITARY OPERATIONS IS A KEYSTONE OF THE NAVY/ MARINE CORPS TEAM.

THE ANNUAL REPORT

The Seabasing Required Capabilities Annual Report is published to provide Navy and Marine Corps capability developers, program managers, operational planners and warfighters an overview of key programs managed and monitored by the Seabasing Integration Division, Headquarters, U.S. Marine Corps, Combat Development & Integration. The Annual Report also provides a list of required capabilities for the Afloat MAGTF to effectively operate in the seabase and to extend naval power ashore through the conduct of naval expeditionary operations.

The ability to operate simultaneously and seamlessly on the seas, ashore, in the air and in space all while operating across the range of military operations is a keystone of the Navy/ Marine Corps Team. Naval Expeditionary Forces, a combination of Marine Air Ground Task Forces (MAGTFs) and Navy Ships, enable us to move seamlessly through these domains and provide a uniquely critical and capable component of our ability to forward deploy our naval capability for persistent presence and crisis response in a dynamic threat environment.

This Annual Report for sea-based requirements positions us to be ready to meet those needs and to ensure we are adequately resourcing seabasing capabilities.



U.S. MARINE CORPS

SEABASING REQUIRED CAPABILITIES 2013

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Our Reality

We are a Maritime Nation. Freedom of movement and freedom of access are key to our national security and economic stability.

Littorals contain the Key Global Engagement Points. The Navy-Marine Corps team is uniquely organized, trained, and equipped to assure access and influence in the littorals.

Amphibious Warships are More than Transports. They are versatile, interoperable, warfighting platforms, capable of going into harm's way and serving as the cornerstone of America's ability to project power & respond to the range of crises.

Connectors are Critical Enablers. Connectors are a necessary component of naval expeditionary capability and require adequate resourcing.

Our Amphibious Requirement is based on 2.0 MEBs Conducting Simultaneous Forcible Entry Operations. The USMC amphibious shipping requirement is based on war plans containing the assault echelons of 2 MEBs conducting simultaneous forcible entry operations.

MPF is a Proven Capability. The Maritime Prepositioning Force provides global coverage, forward presence, and crisis response.

Seabasing Enabled Capability provides Employment Options. The introduction of the T-AKE, MLP and LMSR into the MPF program provides a seabasing-enabled capability for employment options that span the range of military operations.

Assault Amphibious Vehicles work to bridge Boundary between Sea and Land. The Assault Amphibious Vehicle is a critical link that enables surface access from the sea for the joint force to cross the surf zone, rapidly get off the beach, and facilitate maneuver to the objective.



OUR WORLD

Threats: The “new norm” of extremism, economic disruption and social change generate new potential security threats at an accelerating pace. In a rapidly modernizing world marked by perpetual conflict, instability and humanitarian disasters, our nation must have a force capable of quickly and persuasively projecting American influence, any time and any place.

Budget: Our leadership is faced with a fiscally constrained environment. As a maritime nation with global interests and key dependencies on the stability of the global economic system, an investment in naval expeditionary forces is an insurance policy against unpredictable crises and a signal to our friends and allies that security is just over the horizon.

Rebalance to the Pacific: The Pacific is a maritime theater with vast stretches of ocean and seemingly endless miles of littoral coastline. The Pacific is a key to future economic growth and stability. The sheer size of this geographic space underscores the value of forward deployed maritime forces and the significance of littoral maneuvers.

OUR CORE

The unpredictable and chaotic security environment in which we find ourselves presents security challenges that are clearly aligned with the core competencies of the Marine Air Ground Task Force (MAGTF). The MAGTF is the nation’s expeditionary force in readiness, and crisis response is the MAGTF’s core competency. The MAGTF consists of a Command Element, a Ground Combat Element, an Aviation Combat Element and a Logistics Combat Element. Each MAGTF is tailored to meet a range of missions along the continuum of military operations. MAGTFs provide combatant commanders with scalable, versatile expeditionary forces able to assure allies, deter potential adversaries, provide persistent U.S. presence with little or no footprint ashore, and respond to a broad range of contingency, crisis and conflict situations.

MEF: The largest MAGTF is a Marine Expeditionary Force commanded by a General Officer and contains a command element, a Marine Division, a Marine Aircraft Wing and a Marine Logistics Group. The MEF is typically deployed for major combat operations on board amphibious ships maritime prepositioning ships, and strategic airlift and sealift.

MEB: The Marine Expeditionary Brigade is commanded by a General Officer and contains a command element, a Regimental Landing/Combat Team, a fixed wing and a rotary wing Marine Aircraft Group and a Combat Logistics Regiment. The MEB deploys on amphibious warfare ships. The Chief of

Naval Operations and the Commandant of the Marine Corps have determined the force structure to support the deployment and employment of 2 MEBs simultaneously is a total of 38 amphibious assault ships. Understanding this requirement in light of fiscal constraints faced by the nation the Department of the Navy has agreed to sustain a minimum of 33 total amphibious assault ships. This 33 ship force accepts risk in the arrival of combat support and combat service support elements of the MEB, but has been adjudged to be adequate in meeting the needs of the naval force within today’s fiscal limitations. The MEB can also deploy the force using a combination of strategic airlift and sealift capability. Essential combat equipment and supplies are loaded on each Maritime Prepositioning Ship Squadron (MPSRON) to initiate and sustain MEB operations for 30 days. With the introduction of the seabasing enabling module (LMSR, T-AKE, MLP) each MPSRON will have an enhanced capability to Close, Assemble, Employ, Sustain and Reconstitute forces from the seabase.

MEU: The Marine Expeditionary Unit is forward deployed aboard amphibious warfare ships where they operate continually. The MEU is commanded by a Colonel and contains a command element, a Battalion Landing Team, a Composite Aviation Squadron and a Combat Logistics Battalion. The MEU provides national leaders with credible deterrence and decision time across the range of military operations. MEUs are characterized by their sea-based forward presence, expeditionary nature, ability to plan for and respond to crisis, combined arms integration and their interoperability with joint, combined and special operations forces.

SPMAGTF-CR: Special Purpose Marine Air-Ground Task Force- Crisis Response is a tailored, forward deployed, self-mobile, self-sustaining force of approximately 500 Marines and sailors, capable of responding to a range of crises. The unit is specifically trained to support U.S. and partner interests throughout a designated geographic combatant commander’s area of responsibility, to include embassy reinforcement, support to noncombatant evacuation operations, tactical recovery of aircraft and personnel, humanitarian assistance, and disaster relief. The unit also takes part in bilateral and multilateral training exercises with regional partners. It is commanded by a Marine colonel.

OUR PROMISE

We are United States Marines. We have carried a tradition of honor, courage and commitment since 1775.



Seabasing Required Capabilities Annual Report 2013

Marines have fought in large and small wars, readily adapting to the nation's needs and demands. The adaptability of Marines to challenges in every clime and place is a hallmark of our Corps. We have fought pirates, insurgents, regulars and irregulars. We've fought them in the air, on the ground, at sea and in cyberspace. We are expeditionary, tough, disciplined, and always faithful. We have a well-earned reputation for directness, but this belies a subtlety and complexity in our warfighting capabilities.

The Marine Corps remains first and foremost a naval service, operating in close partnership with the United States Navy. The Navy/Marine Corps team uses the advantage of all domains to project naval power at the time and place of our choosing. We give the joint force the ability to rapidly mass combat power in unexpected places, the resilience to operate under austere conditions with a low footprint, and the ability to apply discriminating solution sets in any environment. We provide the flexibility to rapidly return to the sea when the mission is complete. Together, the naval services provided the ability to gain access and project power across domain seams, and through the full range of military operations.

OUR PROCESS

The Deputy Commandant for Combat Development and Integration is the Marine Corps Seabasing Advocate. As such, DC, CD&I identifies seabasing required capabilities, deficiencies, issues, and solutions and advances them through various HQMC, Department of the Navy, Joint Staff and Department of Defense processes.

Seabasing Integration Division (SID) is the staff organization within CD&I that advises and assists DC, CD&I on seabasing matters. In delivering this Annual Report, SID sought out and solicited operational input from various activities and forums. The outcomes and lessons learned from testing, modeling, analysis, demonstrations, war games, exercises, and operations are collated and presented here as the *Required Capabilities Section* and are necessary to enhance the Afloat MAGTF's capabilities and capacities.

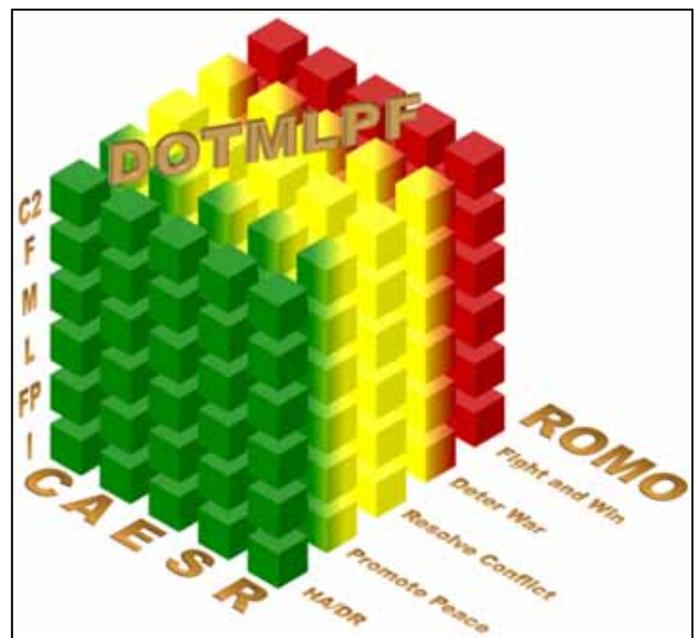
Seabasing's required capabilities are derived from analytic review of past, present and future operations, exercises, and Service level tasks and concepts. Gaps in Seabasing required capabilities are identified through lessons learned, after action reports, needs statements, modeling and simulation, and war gaming. Gaps are examined through multiple seabasing-related factors (Figure 1) such as the seabasing lines of operation (Close, Assemble, Employ, Sustain, Reconstitute - CAESR), warfighting functions (C2, ISR, Fires, Maneuver, Logistics, Force Protection, Cyber), and across the range of military

operations (ROMO). Solutions for seabasing gaps are developed by examining the proposed solution through inputs gathered from our partners, stakeholders and other sources.

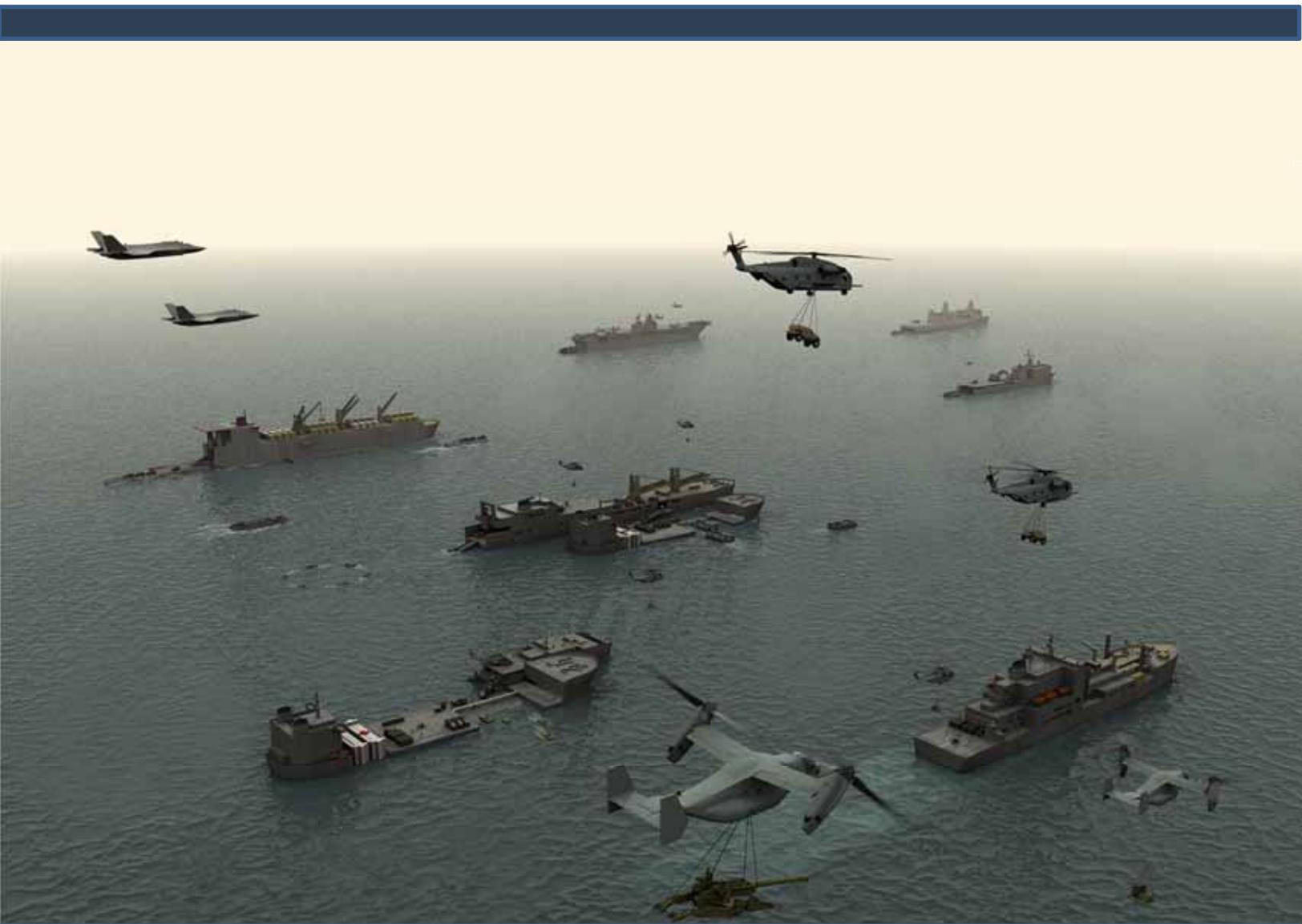
Partners, Stakeholders and Other Sources

- Marine Corps Operating Concepts
- Marine Corps Enterprise Integration Plan
- Seabasing Operational Advisory Group
- MEU Operational Advisory Group
- Science and Technology Operational Advisory Group
- MPF Operational Advisory Group
- Expeditionary Warfare Improvement Program
- Expeditionary Warrior Title 10 Wargame
- Coconut Grove 13
- Freedom Banner/ Balikpapan 13
- Bold Alligator 13
- African Lion 13
- MEU After Action Reports
- MEU Embarkation Observations and Assessments

Figure 1. Seabasing Capability Development Factors



SEABASING





THE BASICS OF SEABASING: FORCES CLOSE FROM CONUS OR A PREPOSITIONED SITE AND THEN ASSEMBLE AT SEA. THIS ALLOWS OUR FORCES TO EMPLOY IMMEDIATELY UPON ARRIVING IN THEATER WITH OR WITHOUT A FRIENDLY AIRFIELD OR PORT. SEA-BASED FORCES MANEUVER DIRECTLY TO THE OBJECTIVE RATHER THAN FIRST ESTABLISHING A PRESENCE ON SHORE.

Seabasing is defined as the deployment, assembly, command, projection, sustainment, reconstitution and reemployment of joint power from the sea without reliance on land bases within the operational area. The seabase consists of numerous platforms including, amphibious warfare ships, prepositioning ships, and vertical and surface connectors. The overall intent of seabasing is to make use of the flexibility and protection inherent in maneuver at sea while minimizing the presence of the Marine Air Ground Task Force (MAGTF) ashore. Seabasing will minimize the need to build up logistics assets ashore, reduce the operational demand for strategic sealift and airlift capabilities, and permit forward positioning of joint forces for immediate employment.

Seabasing also provides the joint force commander with the ability to expand the battlespace beyond enemy reach by moving critical command and control, fire support, logistics, and other assets to the most mobile and secure operational area – the sea. Capabilities protected at sea include robust, survivable, and flexible C2 with global connectivity; highly responsive, precise, and far-ranging fires from naval guns, missiles and aircraft; and vital logistical support to include supplies, medical and repair capabilities.

Viewing the seabase as a capability, it can be formed by a small group of ships or a larger, more diverse force. The key is capability; the capability will increase as the seabase grows. All components will play a role in seabasing and will compress deployment and employment times to permit power projection within days rather than weeks or months without reliance on easily targeted and often geographically unsuitable ports or airfields ashore.

Platforms

Amphibious Warfare Ships

LHA, LHD, LSD, LPD

Amphibious Warfare Ships are versatile, flexible, multi-mission platforms that provide persistent U.S. presence with little or no footprint ashore. These ships offer warfighting platforms for the joint force to plan, train, and rehearse military actions. The ships are designed to command, employ, land, and sustain joint forces using a variety of vertical and surface connectors. Amphibious warships are in high demand by combatant commanders to conduct persistent presence, crisis response and power projection across the range of military operations.

Maritime Prepositioning Ships

MLP, T-AK, T-AKR, T-AKE

Maritime Prepositioning strategically places supplies for the Marine Corps at sea, positioned for rapid delivery ashore when needed. These ships are stocked with a variety of equipment and supplies, including tanks, ammunition, food, water, cargo, hospital equipment, petroleum products and spare parts. Prepositioning ships provide quick and efficient movement of military assets between operating areas without reliance on other nations' transportation networks. These ships give the COCOMs and warfighters the assurance that they will have what they need to quickly respond in a crisis - anywhere, anytime.



Connectors

From the Ship to and over the Shore

Vertical MV-22, CH-53, UH-1

Surface LCAC, LCU, JHSV

Connectors are surface or air vehicles that transport personnel and equipment from ship-to-shore - even ship-to-objective - as well as within the seabase. The ability to quickly and efficiently employ forces from the seabase and then sustain them is a mission essential capability.

A wide variety of surface and area of responsibility (AOR) connectors is required to close forces and equipment to the seabase, and move equipment and supplies within the seabase for maneuver and employment ashore. Sea-based platforms are inherently flexible and support the full range of military operations and can interface with various ships in the seabase.

Principles

- Principle 1:* Use the sea as maneuver space.
- Principle 2:* Leverage forward presence and joint interdependence.
- Principle 3:* Protect joint/ coalition force operations.
- Principle 4:* Provide scalable, responsive, joint power projection.
- Principle 5:* Sustain joint force operations from the sea.
- Principle 6:* Expand access options and reduce dependence on land bases.
- Principle 7:* Create uncertainty for adversaries.

Lines of Operation

Close, Assemble, Employ, Sustain & Reconstitute

The seabase supports five overlapping lines of operation: Force Closure, Arrival and Assembly, Employment, Sustainment and Reconstitution. These lines of operation define the directional

orientation of the force in time and space in relation to the enemy. They connect the force with its base of operations and its objectives.

CLOSE: Rapid closure of joint force capability to an area of crisis. Task organized forces and their equipment are loaded onto strategic lift assets and begin flowing to either an advance base or directly to the seabase.

ASSEMBLE: Seamless integration of scalable joint force capabilities on and around secure sea-based assets including reception and integration of sea-based echelons. Once integrated, equipment is readied and units are staged for employment.

EMPLOY: Flexible employment and vertical and surface maneuver of joint force capabilities to meet mission objectives supported from the seabase.

SUSTAIN: Persistent sustainment of selected joint forces afloat and ashore through selective offload operations to support decisive combat operations ashore.

RECONSTITUTE: Preparing units for re-employment. Capability to rapidly recover, reconstitute and redeploy joint combat capabilities within and around the maneuverable seabase for subsequent operations.

Future Evolution

There are key technologies that need to be fully developed to enable seabasing. These include skin-to-skin transfer of cargo and related operations, automated cargo handling systems that will permit selective offload of cargo, cranes with greater capacity able to operate in higher sea states, and the ability to interface and offload rolling stock and cargo with other ships and connectors. These technological challenges are the focus of our science & technology (S&T) and research & development (R&D) efforts.

MAJOR PROGRAMS





AMPHIBIOUS WARFARE SHIPS

LHA, LHD, LPD, LSD

Amphibious warfare ships are the centerpieces of the Navy-Marine Corps presence, forcible-entry, and seabasing capabilities and continue to play essential roles in global operations. These ships are equipped with aviation and surface assault capabilities that, when coupled with their inherent survivability and self-defense systems, support a broad range of mission requirements.

These ships 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 maneuver in harm's way and facilitate the rapid employment and sustainment of combat power in the face of opposition. Given 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.



LHA

TARAWA CLASS

LHA 5 USS Peleliu (decomm est FY15)

AMERICA CLASS

LHA 6 USS America (delivery est FY14)
LHA 7 USS Tripoli (delivery est. FY18)

The LHA amphibious assault ship's mission is to operate offensively in a high-density, multi-threat environment and support the strategic agility, operational reach and tactical flexibility required for successful amphibious operations and the rapid operational tempo required by the MAGTF. LHA can be the central component of an Amphibious Ready Group (ARG), Expeditionary Strike Group (ESG), or as part of the seabase.

Currently, there are two LHA classes: Tarawa and America. LHA 5 USS Peleliu is the last remaining LHA of the Tarawa class. She is scheduled to be decommissioned in FY15. The America class will consist of LHA 6 USS America and LHA 7 USS Tripoli. LHA 6 is scheduled for delivery in third quarter FY14. LHA 7 is scheduled for delivery in FY18. The America class is optimized for aviation operations and does not contain a well deck for surface interface operations.

The LHA 8 class will restore a two LCAC spot well deck allowing for surface interface operations while maintaining aviation capabilities commensurate with modern aircraft.



AMERICA CLASS (LHA 6 & LHA 7)

Speed	22.3 kts
Crew	1,204
Embarked Landing Force	1,518 (90% UIF)
Surge	184 Accommodations
Medical Capability	2 OR, 24 Ward
Mass Casualty/ Receiving	699 Overflow
Potable Water	200,000 gal/day
Surface Interface Point	None
Well Deck Capacity	N/A
Flight Deck (Spots, Level, Class)	9 Spots; 3 spots Stbd used for A/C Stowage (Level I, Class 1)
Elevators	2, One Stbd (37.5 t), One port (37.5 t)
Hangar	25,937 sqft, two 7 Frame High Bays (3,918 sq ft)
Ramp	Pier side, Side Port
Vehicle Sq Ft (Net)	10,328 sq ft (63%)
Cargo Cube (Net)	160,000 sq ft (75%)
Lifting Capability	Crash Crane (50K lb)
Cargo Fuel	1.3 million gal
Motor Gasoline	330 gal (embarked drum or bladder)



LHD

WASP CLASS

- LHD 1 USS Wasp
- LHD 2 USS Essex
- LHD 3 USS Kearsarge
- LHD 4 USS Boxer
- LHD 5 USS Bataan
- LHD 6 USS Bonhomme Richard
- LHD 7 USS Iwo Jima
- LHD 8 USS Makin Island

The LHD 1 class amphibious assault ship's mission is to operate offensively in a high density, multi-threat environment as an integral member of an amphibious ready group. The ship is capable of functioning as an expeditionary strike group flagship. Facilities are provided for an embarked landing force command and staff, and for an Expeditionary Strike Group Commander and associated staff. During amphibious operations, the ship can operate from over the horizon or close to the shoreline under restricted maneuvering conditions. It is able to conduct sustained amphibious operations after the initial assault. The ship is capable of interfacing with both vertical and surface connectors and conducting simultaneous flight deck and well deck operations.



WASP CLASS	
Speed	24+ kts
Crew	1,285
Embarked Landing Force	1,527 (90% UIF)
Surge	185 Accommodations
Medical Capability	6 OR, 18 ICU, 36 Ward, 6 Iso Ward
Mass Casualty/ Receiving	536 Overflow (Level II Echelon CRTS)
Potable Water	200,000 gal/day
Well Deck Capacity	13,045 sqft (28'7" ht): 3 LCAC or 2 LCU, or 21 ACV
Flight Deck (Spots, Level, Class)	9 Spots; 3 spots Stbd used for A/C Stowage (Level I, Class 1)
Elevators	2 (1 Stbd, 1 Port) 37.5 ton
Hangar	20,437 sqft
Ramp	Pier side, Stern
Vehicle Sq Ft (Net)	17,674 sqft (63% BSF): includes 1,719 sqft Pre-boat
Cargo Cube (Net)	93,750 cuft (75% BSF)
Cargo Fuel	454,928 gal (LHD 1-4) 582,323 gal (LHD 5-8) (95%)
Motor Gasoline	330 gal



LPD

AUSTIN CLASS

LPD 9 USS Denver (decomm FY14)

SAN ANTONIO CLASS

LPD 17 USS San Antonio
 LPD 18 USS New Orleans
 LPD 19 USS Mesa Verde
 LPD 20 USS Green Bay
 LPD 21 USS New York
 LPD 22 USS San Diego
 LPD 23 USS Anchorage
 LPD 24 USS Arlington
 LPD 25 PCU Somerset (delivery FY14)
 LPD 26 PCU John P Murtha (delivery FY16)
 LPD 27 PCU Portland (delivery FY17)

The LPD 17 class amphibious assault ship's mission is to operate offensively in a medium-density multi-threat environment as an integral member of an Expeditionary Strike Force (ESF) or Expeditionary Strike Group (ESG). LPD 17 class is not flag-configured. During amphibious assault, the ship can conduct near simultaneous combined and coordinated air and surface-launched operations from over the horizon or close to the shoreline under restricted maneuvering conditions by coordinating landing and recovery of aircraft and landing craft.



SAN ANTONIO CLASS

Speed	22+ kts
Crew	364
Embarked Landing Force	628 (90% UIF)
Surge	101 Accommodations
Medical Capability	2 OR, 6 ICU, 22 Ward, 2 Isolation Ward
Mass Casualty/ Receiving	Level II CRTS, 100 Overflow = Surge berths
Potable Water	Distill 72,000 gal/day
Surface Interface Point	1
Well Deck Capacity	9,833 sqft (21'2" ht): 2 LCAC or 1 LCU, or 15 ACV
Flight Deck (Spots, Level, Class)	2 Ops Spots, 4 Exp spots, 20,242 sqft (Level I, Class 1 for MV-22)
Elevators	2 Cargo: one 12,000 lbs, one 16,000 lbs, and a lift platform 6,000 lbs
Hangar	3,294 sqft sqft (1 MV-22 or CH 53K); 2,381 sqft Crane
Ramp	Stern, Side Port
Vehicle Sq Ft (Net)	20,880 sqft (65% BSF): includes 1,146 sqft Pre-boat
Cargo Cube (Net)	35,943 cuft (75% BSF)
Lifting Capability	Hangar 4.3K, Art Boom 22k, Well Bridge 10k
Cargo Fuel	318,308 gal
Motor Gasoline	330 gal



LSD

WHIDBEY ISLAND CLASS

- LSD 41 USS Whidbey Island
- LSD 42 USS Germantown
- LSD 43 USS Fort McHenry
- LSD 44 USS Gunston Hall
- LSD 45 USS Comstock
- LSD 46 USS Tortuga
- LSD 47 USS Rushmore
- LSD 48 USS Ashland

HARPERS FERRY CLASS

- LSD 49 USS Harpers Ferry
- LSD 50 USS Carter Hall
- LSD 51 USS Oak Hill
- LSD 52 USS Pearl Harbor

The LSD 41/49 amphibious assault ship's mission is to operate offensively in a high density, multi-threat environment as an integral member of a joint task force or Expeditionary Strike Group (ESG).

During amphibious operations, the ship can operate from over the horizon or close to the shoreline under restricted maneuvering conditions. It is able to conduct sustained amphibious operations after the initial assault. The ship can conduct near simultaneous combined and coordinated air and surface-launched operations from over the horizon or close to the shoreline under restricted maneuvering conditions by coordinating landing and recovery of aircraft and landing craft.

There are two classes of LSD: Whidbey Island Class and Harpers Ferry Class. The primary difference between the two classes is the operational well deck spots. The Whidbey Island class has four LCAC spots versus the Harpers Ferry Class which has two LCAC spots.



HARPERS FERRY CLASS

Speed	20 + kts
Crew	420
Embarked Landing Force	365 (90% UIF)
Surge	101 Accommodations
Medical Capability	1 OR, 1 POR, 7 Ward,
Mass Casualty/ Receiving	N/A
Potable Water	Distill 60,000 gal/day; Store 34,800
Surface Interface Point	1
Well Deck Capacity	9,276 sqft (30"10" ht): 2 LCAC or 1 LCU, or 12 ACV
Flight Deck (Spots, Level, Class)	2 Spots (1 Ops), 16,100 sqft: spot 1 (7,660 sqft consumed w/ vehicles/cargo (Level I, Class 2A MV-22)
Elevators	N/A
Hangar	N/A
Ramp	Pier side, Stern
Vehicle Sq Ft (Net)	16,326 sqft (63% BSF): includes 1,146 sqft Pre-boat and 7,660 sqft Flight Deck Spot 1
Cargo Cube (Net)	49,742 cuft (75% BSF)
Lifting Capability	Boat & Aircraft 30t
Cargo Fuel	51,923
Motor Gasoline	330 gal



Connectors

<i>Vertical</i>	MV-22, CH-53, UH-1
<i>Surface</i>	LCAC, LCU, JHSV

Connectors are surface or air vehicles that transport personnel and equipment within the seabase and enable maneuver from the seabase to land. The most critical capability possessed by any seabase is its ability to quickly and efficiently deploy, support and sustain combat forces.

Inherent to the success of any operation conducted from a seabase is the movement of large quantities of logistical

supplies over the horizon from the seabase to any or all inland operating areas. The successful execution of this aspect of a seabase requires a large dependence on a variety of vertical and surface connectors, such as the MV-22 Osprey, CH-53 Super Stallion, Landing Craft Air Cushion (LCACs), Landing Craft Utility (LCU), and Joint High Speed Vessels (JHSVs).



VERTICAL CONNECTORS

MV-22B Osprey

The MV-22B Osprey tilt-rotor aircraft, the only such operational military aircraft in the world, is an advanced-technology vertical/short takeoff and landing (VSTOL), multi-purpose tactical aircraft that is replacing the current fleet of Vietnam-era CH-46E & CH-53D helicopters. The MV-22B Osprey was designed to perform missions like a conventional helicopter with the long-range, high-speed cruise performance of a turboprop aircraft.

The world's first production tiltrotor aircraft, the Osprey combines true operational maneuver with tactical lift to a level never before seen in military operations. It enables an exponential increase in the speed of combat power build-up from the sea. For takeoff and landing, it typically operates as a helicopter, and once airborne, the nacelles rotate forward 90° for horizontal flight, converting the MV-22B to a more fuel-efficient, higher-speed turboprop airplane. STOL rolling-takeoff and landing capability is achieved by having the nacelles tilted forward up to 45°. For compact storage and transport, the MV-22B's wing rotates to align, front-to-back, with the fuselage.



The USMC variant, the MV-22B, joins the CH-53, Joint High-Speed Vessel (JHSV) and Landing Craft Air Cushion (LCAC)

as the seabasing connectors necessary to execute expeditionary maneuver warfare. Specific missions for the MV-22B include expeditionary assault from land or sea, medium-lift assault support, aerial delivery, tactical recovery of aircraft and personnel, air evacuation, and rapid insertion and extraction.

MV-22B	
Cruise Speed	262 kts
Combat Radius	325 nm
Self-Deployment Range	2100 nm
External Payload	10,000 lbs (Single), 15,000 lbs (Dual)
Internal Capacity	Cargo: 300 lb/ft2 floor load < 20,000 lbs; Litters: 12'
Troop Capacity	Combat troops: 24
Empty Weight	35,000 lbs
Short Takeoff Weight	57,000 lbs

CH-53

The CH-53E/K is critical to sea-based expeditionary maneuver warfare for the Marine Corps. As MAGTF equipment gets heavier demand for vertical heavy lift assets increases.

The CH-53E Super Stallion is the largest and heaviest helicopter in the United States military. The CH-53K is the Heavy Lift replacement helicopter being developed to supersede the CH-53E.



The CH-53 provides the Marine Corps with the ability to transport 36,000 pounds of external cargo and is specifically designed to lift 27,000 pounds of cargo up to 110 nautical miles in support of future warfighting concepts. The CH-53K



Seabasing Required Capabilities Annual Report 2013

generates nearly three times the external lift capability of the CH-53E under the same environmental conditions, while fitting within the same shipboard footprint. Performance improvements enable vertical insertion of dual-slung up-armored HMMWVs, the JLTV, LAV, or three individually tailored resupply loads delivered to three different operating bases using the independent triple-hook external load system. The CH-53K can also transport 463L aircraft pallets with netted loads.



CH-53E

Speed	150 kts
Max Range	540 nm
Mission Radius	110 nm
External Payload	32,000 lbs
Internal Capacity	Cargo: 10,132 lbs; Litters: 24'
Troop Capacity	Combat troops: 37
Empty Weight	37,500 lbs
Max Weight	Wheels: 69,750 lbs; Ext: 73,500 lbs

CH-53K

Speed	170 kts
Max Range	507 nm
Mission Radius	110 nm
External Payload	36,000 lbs
Internal Capacity	Cargo: 16,900 lbs; Litters: 24'
Troop Capacity	Combat troops: 40
Empty Weight	43,750 lbs
Max Weight	Wheels: 74,500 lbs; Ext: 88,000 lbs

UH-1Y

The UH-1Y is a multi-purpose utility helicopter that can be used in the seabase as a ship-to-ship or ship-to-objective vertical connector capable of transporting personnel, equipment, and supplies. With its increased speed and lift capacity, the UH-1Y gives the MAGTF a significantly increased maneuver, C2, and logistics capability.



UH-1Y

Speed	147 kts
Max Range	130 nm
Mission Radius	119 nm
Max Useful Load	5,930 lbs (Hover out of ground effect)
Max Payload	3,220 lbs
Troop Capacity	Combat troops: 8
Empty Weight	11,839 lbs
Max Weight	18,500 lbs



SURFACE CONNECTORS

Landing Craft Air Cushion (LCAC)

The LCAC is a high-speed, fully amphibious craft. The LCAC's ability to ride on a cushion of air allows it to operate directly from the well decks of amphibious warships and to access more than 70 percent of the world's beaches, compared to 17 percent for conventional landing craft. A service life extension program (SLEP) began in late 2000 for the 72 active LCACs, which provides major refurbishment that will extend craft life to 30 years.

The Ship-to-Shore Connector (SSC) program is developing a replacement for the in-service LCACs and the LCAC service-life extension program (SLEP) as these craft reach the end of their service lives.



Landing Craft Utility (LCU)

Landing craft are used by amphibious forces to transport equipment and troops to the shore and are also used to support civilian humanitarian/maritime operations. Landing craft are capable of transporting cargo, tracked and/or wheeled vehicles and troops from amphibious assault ships to beachheads or piers. LCU's have both bow and stern ramps for onload/offload and have the ability to operate at sea for up to 10 days.

The 40-year-old craft will be replaced under the Surface Connector (X) Recapitalization program.



LCAC	
Speed	40 knots
Combat Radius	200 nmi
Troop Capacity	24
Cargo Capacity	60 tons

LCU	
Speed	12 knots
Combat Radius	1200 nmi
Troop Capacity	400
Cargo Capacity	125 tons



Mobile Landing Platform (MLP)

The MLP is a cornerstone of the Marine Corps and Navy's seabasing capabilities and will be operated by the Military Sealift Command (MSC). Designed to increase intra-theater agility, the MLP is a highly flexible ship class that provides equipment and cargo transfer from sea to shore supporting a broad range of military operations. It serves a transfer point for an amphibious landing force between large ships and ship-to-shore landing craft.

The ship provides the Navy and Marine Corps the ability to conduct at-sea selective offload of equipment and cargo, and maneuver ashore via surface connectors.

The ship's flexibility is critical for humanitarian response to natural disasters and for support to warfighters ashore. Its size allows for 25,000 square feet of vehicle and equipment transfer space and 380,000 gallons of JP-5 fuel storage.

Leveraging float-on / float-off technology and a reconfigurable mission deck to maximize capability, the MLP provides a seagoing pier when access to on-shore bases and support is unavailable. The platform includes a core capability set consisting of a vehicle staging area, vehicle transfer ramp, large mooring fenders and up to three Landing Craft, Air Cushioned vessel lanes that enable surface connector interface for maneuver of equipment and cargo ashore.



Notably, the MLP can operate up to 25 miles from shore and transfer equipment at sea, and with its mission deck removed it can serve as a semi-submersible platform, offering salvage and point-to-point transfer capabilities.

Joint High Speed Vessel (JHSV)

The JHSV will provide the critical intra-theater, surface connector capability that will enable the joint force commander to project forces and sustainment at high speeds over operational distances. The JHSV will be capable of self-deploying to the theater of operations and, once in theater, provide the high-speed means to move forces and supplies within that theater. Specifically, the JHSV will provide the capability to deliver equipment, personnel, and supplies over the intra-theater ranges to shallow, austere, and degraded ports. It will provide support to seabasing and will bridge the gap between low-speed sealift and high-speed airlift.



JHSV	
Speed	35 knots in SS3
Combat Radius	1200 nmi
Troop Capacity	312 for 4 days/104 for 14 days
Cargo Capacity	22000 sq ft



Afloat MAGTF C4ISR

Command, Control,
Communications, Computers,
Intelligence, Surveillance and
Reconnaissance

Afloat MAGTF C4ISR focuses on the fundamental requirement to get the right information to the right Marine at the right time in order to make timely and informed decisions.

Recent history of deployed forces suggests that the non-traditional new normal will be ships in an Amphibious Readiness Group / Amphibious Task Force (ARG/ATF) operating independently from the MEU or MEB by conducting standard and special operations missions. MAGTF afloat capabilities for communications and networks need to support these dynamic requirements to ensure the timely transmission of data and information across a wide variety of operating environments.

The annual Afloat MAGTF C4 Required Capabilities (AMC4RC) letter is published annually by DC, CD&I and provides the OPNAV staff the prioritized baseline for afloat MAGTF C4 required capabilities and shortfalls as they relate to amphibious ships, maritime prepositioning ships, and connectors. Specifically, this letter is developed to provide supporting information for the Navy's POM process for afloat MAGTF C4 capabilities and support technical integration by the Naval Systems Commands.

This annual document is generated and staffed within HQMC CD&I/CDD, adjacent key HQMC staffs, Marine Corps Systems Command and Marine operating forces, and is coordinated with USN stakeholders throughout the year-long generation process.

Afloat MAGTF C4ISR required capabilities support MAGTF C2/C4 and are in alignment with the US Navy Information Dominance roadmap. Naval information dominance is predicated on:

1. Data-centric access to essential combat information.
2. Processing services and interfaces to support coordinated planning, execution decision making and dynamic battle management.
3. Fast, reliable and secure tactical networks that link platforms, sensors and weapons.
4. Assured Position, Navigation and Timing (PNT) services.
4. Assured private network transport (PNT) services.



Seabasing Technologies

Science & Technology (S&T)

Since its approval in 2005, no concept has been the focus of more analysis and discussion than the Seabasing Joint Integrating Concept (JIC). Driving the interest in Seabasing is the increasingly difficult problem of operational access for our military forces—not only of an adversary seeking to deny access to an operating area but also of reluctant allies struggling to balance domestic sensitivities and priorities with their regional security obligations. For the Marines operating in this environment, Seabasing provides MAGTFs the capabilities needed for engagement, crisis response, and power projection across the range of military operations.

By capitalizing on technologies already in development, and through a series of new technology development initiatives, substantial progress has been made towards making the Seabasing concept a reality. With the introduction of the Mobile Landing Platform (MLP) into the seabase comes the ability to transfer heavy equipment to and from amphibious and maritime prepositioning ships. Although not yet programmed for introduction to the fleet, innovative, prototype crane systems were developed to quickly and safely move cargo between ships in higher sea states. A new class of ship, the Joint High Speed Vessel (JHSV) along with the planned recapitalization of both non-displacement and displacement landing craft (SSC, SC(X)) greatly increase the capacity and speed of forces and sustainment flowing in to, between, and from the seabase. New technologies, coupled with new operating concepts, provide ever greater selective access and retrieval of equipment and supplies. And last but not least is the significant increase in our Seabasing capability stemming from Sailors and Marines putting the concept in to practice using today's platforms and systems.

Even with this progress, there is still much work to do before the reality of Seabasing is more fully realized. As an example, much of the technology being fielded or under development gives the seabase a capability to operate into sea state 3 (SS-3) conditions. Those technologies need to be enhanced to provide for operations through SS-4.

The overarching goal for our Science and Technology (S&T) efforts is to ensure that the various components of the seabase are interoperable (connected), optimized to support MAGTF employment in the 2025 operating environment, and operated in the most cost-effective manner possible.

S&T Advanced Mooring System (AMS)

The Advanced Mooring System (AMS) enables frequent, safe, and fast mooring at sea with minimal manpower (no line handling). When installed on the Mobile Landing Platform (MLP) or other ships it facilitates their use as a hub for transfer of materials, equipment, payloads, mission packages, and personnel.

One of the most difficult challenges facing forces conducting sea-based operations is the need to bring ships, vessels, craft, and lighterage together in order to transfer personnel, equipment, and cargo from one platform to another in less than ideal weather conditions. AMS will help sea-based forces quickly & safely moor connectors and high flare container ships to the MLP in high sea states. In addition to enhancing deck crew safety, AMS significantly widens the operating envelop for force closure, arrival and assembly, employment, sustainment, and reconstitution.

AMS is approximately halfway through its five year development program by ONR. It completes its S&T phase in FY15 after which it starts its Research and Development (R&D) development phase under the Strategic Sealift R&D program.





S&T Interface Ramp Technology (IRT)

The improved IRT ramp will enable the JHSV to offload quickly and efficiently in higher sea states within the seabase and at the austere ports and quay walls common in developing countries. An advanced, lightweight, cost-effective ramp system for the JHSV capable of sea state 3 (threshold) and sea state 4 (objective) operations. The current JHSV ramp is limited to sea state 1 operations.

The Joint High Speed Vessel (JHSV) is a critical surface connector, linking intermediate staging bases (ISBs), ships of the seabase, and forces operating ashore. The JHSV—as currently delivered—is limited in its ability to affect those connections in all but the lowest sea states. In order to enhance its ability to transfer personnel, equipment, and cargo within the seabase in more adverse environmental conditions the JHSV needs a more capable ramp.

ONR's IRT effort will complete its S&T phase in late 2014 after which it will transfer to PEO Ships for further R&D grooming before installation on JHSV-4 (USNS FALL RIVER). Installation of IRT ramps on additional JHSVs is part of an ongoing discussion within the Navy.

ESMF significantly increases the safety of inter- and intra-ship operations while also extending the operating environment for various missions. ESMF's ability to predict ship motions will significantly increase the safety of operations between two vessels conducting cargo transfer at sea (LMSR/MLP, MLP/LCAC, etc.). It extends operational environment for various missions by predicting periods of time or ship headings where cargo movement may be conducted despite sea states that "exceed limits" of equipment (ship motions vs. sea state).

ONR will complete its ESMF S&T phase in 2015, after which PEO Ships will continue development and testing. Decisions on which ships will benefit from ESMF have been deferred until the technology is tested and validated.



S&T Ultra Heavy-lift Amphibious Connector (UHAC)

UHAC is an ONR initiative to mature and refine technologies for use in future watercraft development programs. A displacement craft with buoyancy and propulsion provided by an innovative captive air-cell technology, a future full scale UHAC would have up to three times the payload of the Ship-to-Shore Connector (SSC) and approximately the payload of a 1600-series Landing Craft Utility (LCU). It would have the same well deck footprint as an SSC with speeds twice that of an LCU. The captive air cell technology also yields a low ground pressure footprint (less than 2 psi) giving it the ability to traverse mud flats or climb over obstacles in excess of 10 feet. With a projected range of over 200 miles, UHAC could deliver forces and sustainment from well over a horizon.

Future surface connectors with UHAC's speed, payload, range, and ability to operate to and through a beach gives MAGTF commanders a significant improvement in force projection ashore.

S&T Environmental Ship Motion Forecasting (ESMF)

The Environmental Ship Motion Forecasting (ESMF) is a decision support tool that forecasts wave motion and ship motion in response to wave motion. The tool will help ship captains, masters, and their deck crews determine whether it is prudent and safe to conduct ship-ship transfer of people, equipment, and cargo. ESMF's components include a wave radar and a computer that distributes environmental and ship motion information to operators throughout the ship.



ONR and an international partner have successfully demonstrated UHAC's potential with fifth- and half-scale demonstrators. Testing and technology development continues through a variety of funding sources. The Marine Corps Warfighting Lab is sponsoring a half-scale UHAC demonstration during their 2014 Advanced Warfighting Experiment (in conjunction with RIMPAC 2014). ONR product managers are currently working with a number of DOD agencies to secure funding for future product development. Development of a full-scale technology demonstrator is a possibility.



DPART JCTD

The Dense Pack Access Retrieval and Transit (DPART) is a 30 month, FY13 Joint Capability Technology Demonstration (JCTD) co-sponsored by PACOM and TRANSCOM with the Marine Corps as the lead service. This JCTD consists of two systems: the Container-Lift and Maneuver System (C-LMS) and the Autonomous Naval Transport-Large Wheeled Vehicle (ANT-LWV).

The C-LMS is specifically designed to lift and maneuver 20 foot ISO Containers in confined spaces not accessible by traditional material handling equipment (MHE). The ANT-LWV is designed to lift and maneuver 3 axle vehicles within the MTRV family of vehicles. Both the C-LMS and the ANT-LWV will improve the ability to dense pack prepositioning vessels as well as allow for the retrieval/selective access of them from the dense pack configuration.

Ultimately, this will allow combatant commanders the flexibility to have existing loads reconfigured en route to the AOR to better support requirements once they arrive in the AOR. Additionally, these capabilities will have a wide array of applications at bases, stations and depots alike, particularly when moving deadlined or non-operational vehicles. The JCTD officially commenced in Aug 2013 and is scheduled to transition to the General Services Administration (GSA) in FY16.

S&T Large Vessel Interface Lift On/Lift Off (LVI LO/LO)

LVI LO/LO is an advanced, motion-compensated, at-sea cargo transfer system that enables transfer of fully-loaded cargo containers between ships and vessels in sea state 4 and below. Once the technology is fully developed, it will give the warfighter the ability to move containerized logistics through the seabase without having to secure a deep water port for container ship off-loading. This capability greatly increases the potential throughput of the seabase and provides a key logistical enabler for support of a joint task force operating ashore.



SEABASING REQUIRED CAPABILITIES



2013



SEABASING REQUIRED CAPABILITIES 2013

The following pages contain Seabasing Required Capabilities necessary to facilitate the conduct of MAGTF operations from a seabase. Each Capability is grounded in five Seabasing Capability Development Factors. Marine Corps Tasks, Navy Tasks, Warfighting Functions, Seabasing Lines of Operation, and Joint Capability Areas. These Seabasing Capability Development Factors are essential in ensuring the development and delivery of the right capability for mission accomplishment.

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LSD Mid-Life

BACKGROUND: LSDs Mid-life program is a type commander Surface Warfare Enterprise (TYCOM/SWE) priority specifically designed to reverse the material condition of critical and auxiliary systems, replace obsolete equipment and reduce total ownership costs through technology insertion to ensure LSDs meet their 40 year Expected Service Life.

REQUIRED CAPABILITY: The Marine Corps requires minimum inventory of 33 amphibious warfare ships/operational platforms of which 11 are LSDs capable of sufficiently meeting global forward presence, power projection, and crisis response requirements. LSDs deploy in support of independent operations and aggregate ARG and ATF operations in support of SPMAGTF, MEU, or MEB amphibious operations. LSDs provide significant heavy lift capacity, aviation, command and control, and the largest ship capacity to husband and operate both displacement and non-displacement surface connectors.

IMPACT: The LSD mid-life program will enhance our ability to train and deploy in support of COCOM steady state obligations and emergent crisis response and OPLAN requirements.

CURRENT STATUS: Eight have completed mid-life, one is undergoing mid-life, and two (LSD 50 & 52) are scheduled for FY14.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations; 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Command and Control; Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Insert, Influence, (Maritime); 4.1- Deployment & Distribution, Move the Force; Sustain the Force.



LHD 1 Class Mid-Life: Stability & Aviation Systems Integration

BACKGROUND: LHD 1 class mid-life upgrade is a priority in achieving expected service life threshold of 40 years with an objective of 50 years by improving stability and aviation systems. Critical modernization upgrades that are projected to take place one platform per year from FY16-FY23. These modernization upgrades include structural mods to support MV-22 ops, Small Tactical Unmanned Air System (STUAS), Consolidated Afloat Network and Enterprise Network Services (CANES), Capstone Ship Self Defense System (SSDS), JSF External Environment (EE), and Joint Strike Fighter (JSF) Cornerstone.

REQUIRED CAPABILITY: The Marine Corps requires a minimum inventory of 33 modern amphibious war ships/operational platforms; 11 are big decks and eight of those are LHDs, capable of meeting global forward presence, power projection, and crisis response requirements. LHDs provide significant heavy lift capacity, aviation facilities, command and control, and operate both displacement and non-displacement surface connectors. Capable of conducting simultaneous vertical and surface connector operations, LHDs deploy in support of independent, and aggregated, and disaggregated Amphibious Ready Group (ARG) and amphibious task force (ATF) operations for Special Purpose Marine Air-Ground Task Force (SPMAGTF), Marine Expeditionary Unit (MEU), and Marine Expeditionary Brigade (MEB) amphibious operations. The MAGTF's ability to execute the full spectrum of military operations is dependent on enhancements gained through this modernization to support JSF fifth generation aircraft.

IMPACT: LHD Class mid-life completion is critical for sustained amphibious warship readiness. Modernization of LHD is necessary to leverage the major investment in the F-

35B, thereby ensuring that platform operational readiness exists to exploit the JSF's technological capabilities. Eleven big decks will be delivered by FY24 (10 in FY14, 9 in FY15 - FY17, and 10 in FY18- FY23). LHDs provide the largest amphibious capacity to operate, project air power, and provide surface connectors combined with an embarkation capacity that offers significant heavy lift capability to support COCOM requirements in support of validated OPLANS, CONPLANS, and Theater Engagement Plans. Eight operational LHDs are required in the Assault Echelon (AE) inventory for the Marine Corps to meet global requirements and operate as an amphibious force in readiness.

CURRENT STATUS: Eight LHDs are schedule for mid-life upgrades beginning in FY16 with LHD 2 and will be completed in FY23 with LHD 8. Mid-life upgrades will include CANES, JSF Cornerstone and External Environment installs, CAPSTONE (SSDS-Link 16), and STUAS modifications.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations; 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Command & Control; Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

3.1.- Force Application, Maneuver to Engage, Insert, Influence, (Maritime); 4.1- Logistics, Deployment & Distribution, Move the Force, Sustain the Force.



LHA 8: LHA(R) Flight 1

BACKGROUND: LHA 8 is a modified repeat of the LHA(R) Flight 0 which restores the well deck with capacity for two landing craft air cushion (LCAC). An additional feature is the reduced island which increases the aviation capacity of the flight deck while retaining the enhanced aviation support capabilities of LHA(R) Flight 0. LHA 8 will provide a functional replacement for the aging LHA 1 Class ships, the last of which decommissions in FY15. This technologically advanced amphibious ship will be capable of providing forward presence and power projection as an integral part of joint, interagency, and multinational maritime expeditionary forces while exploiting 5th generation aviation assets like the Joint Strike Fighter.

REQUIRED CAPABILITY: The Marine Corps requires an Amphibious Assault Ship with multiple surface connector interface capability which was removed in LHA 6/7. The Marine Corps requires a minimum inventory of 33 modern amphibious war ships/operational platforms; 11 are big decks and currently only one is a Tarawa Class LHA (LHA 5 USS Peleliu). These ships must be capable of sufficiently meeting global forward presence, power projection, and crisis response requirements. America Class LHA(R) provides significant aviation capability, and command and control, but removed the ability to operate both displacement and non-displacement surface connectors. LHA 8 will restore the capability to conduct simultaneous vertical and surface connector operations allowing deployments in support of independent, aggregate, and disaggregated ARG, and ATF operations for SPMAAGTF, MEU, and MEB, amphibious operations. The MAGTFs ability to execute the full spectrum of future military operations is dependent on enhancements gained through this modernization to support emerging global operational requirements in and around the littorals.

IMPACT: LHA 8 is critical to sustain future amphibious readiness. The modernization of amphibious big decks is necessary to leverage the major investment in Navy/Marine Corps futures which capture the platform operational readiness necessary to exploit the 5th generation aircraft technological

capabilities of the Joint Strike Fighter and surface connectors. Failure to modernize the amphibious big deck inventory will degrade the capability to conduct amphibious operations and negatively impact the baseline requirement for 11 big deck amphibious ships. LHA 8 is currently slated to be delivered in FY24. Until then big deck inventory numbers will remain below the 11 big deck vessel threshold (10 in FY14, 9 in FY15 - FY17, and 10 in FY18 - FY23). Reduced availability of Amphibious Assault Ships affects aviation combat readiness by not having enough big decks to conduct deck landing qualifications (DLQs) for combat aircrew. Reduced numbers of Amphibious Assault Ships impacts the combatant commanders (CCDRs) ability to carry out National Defense Strategies and the Marine Corps ability to conduct MEB level engagements. Without the capability to conduct simultaneous vertical and surface employment of the Assault Echelon from the Amphibious ship inventory the Marine Corps will be hard pressed to meet COCOM requirements in support of validated Operational Plans (OPLANS), Contingency Plans (CONPLANS), and Theater Engagement Plans.

CURRENT STATUS: CDD in Joint Staffing. Detailed Design request for proposal (RFP) FY14. LHA 8 is scheduled for procurement in FY17 and delivery in FY24.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations; 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Insert, Influence, (Maritime); 4.1- Logistics, Deployment & Distribution, Move the Force; Sustain the Force.



LX(R): LSD Replacement

BACKGROUND: LX(R) (formerly LSD(X)) is expected to functionally replace LSD 41/49 Class ships for embark, transport, control, insert, sustainment, and extract of Marine Air-Ground Task Force elements and supporting forces by helicopters, landing craft, and amphibious vehicles.

REQUIRED CAPABILITY: The Marine Corps requires a minimum inventory of 33 modern amphibious warfare ships/operational platforms of which 11 are LSDs capable of sufficiently meeting global forward presence, power projection, and crisis response requirements. The LSD replacement must have vertical and surface connector interface and be capable of deploying, basing, employing, and sustaining MAGTF personnel, equipment and supplies. The LX(R) should be capable of deploying in support of independent, aggregate, and disaggregate ARG and ATF operations ISO SPMAGTF, MEU, or MEB amphibious operations. The replacement ship should be capable of providing significant heavy lift capacity, aviation, command and control, and have the largest ship capacity possible for its size to husband and operate both displacement and non-displacement surface connectors.

IMPACT: PB14 LRSS LSD 41/46 vessels will begin to be decommissioned beginning in FY 15 13/19 years ahead of their service life allowance. LSD's project ~31% of the Marine Expeditionary Units combat power and their importance cannot

be overemphasized. Failure to fully fund or execute LX(R) in FY19 will impact the Marine Corps ability to sustain long term amphibious operations and ensure reliable platforms with which to support COCOM steady state obligations, emergent crisis response, and OPLAN requirements by not having a suitable replacement for the aging fleet of LSDs.

CURRENT STATUS: OSD CAPE/N95 Analysis of Alternatives (AoA) is currently underway. CDD development is scheduled to occur in FY14. The first LX(R) platform is scheduled for procurement in FY19 and delivery in FY25.

Marine Core Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations; 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Command and Control; Maneuver; Logistic.

Seabasing Lines of Operation:

Close; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Insert, Influence (Maritime); 4.1- Logistics, Deployment & Distribution, Move the Force, Sustain the Force.



LCAC (SLEP) & Sustainment

BACKGROUND: The LCAC Service Life Extension Program (SLEP) program began in 2000 and is planned to be completed in FY18. Coupled with the LCAC (post-SLEP) sustainment effort, it extends the service life of the Required Operational Capability/Projected Operational Environment (ROC/POE) 72 craft from 20-30 years and helps minimize the non-displacement craft quantity gap until/while the LCAC-100 class craft produced in the Ship-to-Shore Connector (SSC) program is introduced into the fleet.

REQUIRED CAPABILITY: Fully fund LCAC (SLEP) and LCAC sustainment to minimize pending craft gap. The SLEP program is designed to upgrade engines and refurbish rotating machinery for more power along with fuel and maintenance efficiencies. Outfit with deep skirt to reduce maintenance and increase performance. Replace C4N equipment to provide open architecture, precision navigation, and enhance interoperability.

IMPACT: The pending non-displacement craft gap will cause degradation in the ability to conduct amphibious operations. LCAC SLEP and sustainment are essential to minimize LCAC gap as LCAC-100s enter service. LCAC (SLEP) and sustainment were included within # 2 (surface connectors) on the 2013 AMW Integrated Prioritized Capability List (IPCL).

CURRENT STATUS: 72 craft are to undergo SLEP from the original 91 produced. 20 SLEP craft remain with a build profile of 4 per year from FY14 - FY18. The potential exists for SLEP extensions to add 5 more years of service life to further minimize gap.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations; 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Engage, Insert, Influence (Maritime); 4.1- Logistics, Deployment & Distribution, Move the Force, Sustain the Force.



Ship-to-Shore Connector (SSC) Program (LCAC-100)

BACKGROUND: The SSC program of record will produce the LCAC-100 class craft to replace the current fleet of legacy LCAC and LCAC (SLEP) with an Initial Operational Capability (IOC) in 2020 and a full Operational Capability (FOC) in estimated 2029. The LCAC-100 will provide more powerful engines, increased reliability, advanced navigation and engineering control systems, and more payload capacity to maneuver troops and equipment from ships to over-the-shore within the littorals. SSC was #2 on the 2013 AMW Integrated Prioritized Capability List (IPCL).

REQUIRED CAPABILITY: A ship to over-the-shore non-displacement landing craft with increased payload and reliability beyond the legacy LCAC and LCAC (SLEP) is required to support MAGTF maneuver in the littorals. The LCAC-100's capabilities include: (1) 74 ton payload capacity to carry an M1A1 tank with track width mine plow, (2) Operational environment of a significant wave height of 4.1 ft with an ambient temp of 100 degrees F, (3) Main cargo (level) deck ~ 50 feet x 24 feet wide, strengthened to accommodate heavier footprints (mobile loaded MTRVs) outboard of center-line, and (4) Increased automation/human-system interfaces to allow for a two-person pilot/copilot cockpit configuration.

IMPACT: Full funding is critical to minimize the gap in the Required Operational Capability/Projected Operational

Environment (ROC/POE) quantity of 72 craft needed for surface ship-to-over-the-shore and over-the-horizon littoral maneuver as legacy LCAC and LCAC (SLEP) craft are retired when reaching the end of planned extended service life.

CURRENT STATUS: The economic minimum production quantity in the acquisition strategy is 5; program build plan identifies an option to increase production to 8 or more per year.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations, 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Maneuver, Logistics.

Seabasing Lines of Operation:

Close, Employ, Sustain, Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Engage, Insert, Influence, (Maritime); 4.1- Logistics, Deployment & Distribution, Move the Force; Sustain the Force.



LCU Sustainment & Surface Connector (X)-Recapitalization

BACKGROUND: The LCU 1600 class landing craft provides the heavy payload capacity and independent operations capability necessary to ensure surface movement and crisis response requirements can be met across the ROMO. These craft were built for a service life of 25 years; however, the fleet age currently averages 40 years. Maintenance and equipment obsolescence are increasing the challenges associated with the LCU sustainment program while the class continues to experience a high demand signal.

REQUIRED CAPABILITY: A heavy lift displacement craft to maintain the necessary balanced landing craft fleet required for surface movement and maneuver in the littorals. The planned SC(X) program will recapitalize the LCU 1610 class capabilities that provide: (1) Simultaneous transport of personnel and cargo (up to 400 passengers without modification), (2) Persistence (10 day / 1,200 nm), forward staging, small boat platform, dive support, surveillance (LCAC limited to 12 hrs; well deck required), (3) For operations in confined or debris-congested waterways; surf salvage; TSC, building partnerships, (4) A key component of logistics-over-the-shore operations via interface with roll-on-roll-off discharge facility (RRDF), Improved Navy Lighterage System (INLS), and Army Modular Causeway System (MCS). Critical is a two M1A1 tank with track-width mine plow (TWMP) payload capacity and the ability to provide intra-theater / shore-to-shore maneuver of up to 170 short tons of vehicles, equipment, and sustainment. The current Required Operational Capabilities (ROC) and Projected Operational Environment (ROC/POE) quantity of 32 is consistent with the high demand stemming from its flexibility and value for ARG/MEU and independent amphibious warship deployments. LCU sustainment & SC (X) were prioritized

within #2 on the 2013 AMW Integrated Prioritized Capability List (IPCL).

IMPACT: LCU Sustainment and SC (X) programs require funding to retain the heavy lift and flexible displacement craft capability needed to fulfill amphibious and expeditionary operational requirements.

CURRENT STATUS: Even with the oldest active LCU being more than 50 years old, the ongoing sustainment program is designed to retain the ROC/POE inventory at 32 craft; however, escalating costs makes this a challenge going forward. The SC(X) Initial Capabilities Document (ICD) has completed joint staff review and the AoA is scheduled to begin FY13.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations, 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Maneuver, Logistics.

Seabasing Lines of Operation:

Close, Employ, Sustain, Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Engage, Insert, Influence (Maritime); 4.1- Logistics, Deployment & Distribution, Move the Force, Sustain the Force.



Joint High-Speed Vessel (JHSV)

BACKGROUND: The JHSV bridges the gap between low-speed sea lift and high speed airlift by transporting personnel, equipment, and supplies over intra-theater distances with access to littoral offload points including austere, minor and degraded ports.

REQUIRED CAPABILITY: The JHSV is a non-combatant, and is designed to operate in permissive environments. Key capabilities are (1) Transport 600 short tons of cargo, combat-loaded vehicles, and supplies for 1200 nm at 35 knots, (2) Off-load pier side in austere environments without reliance on shore infrastructure or to a roll off/roll-on discharge facility (RRDF) in sea state (SS)1, (3) 20,000 ft² mission bay/cargo space to support a combat-loaded M1A2 tank, (4) 312 airline seats and 104 permanent berths for embarked troops, (5) Launch/recover small boats (11 meter RHIBs) with its organic 20-ton crane, and (6) Flight deck accommodates H-60, H-1, and H-53 aircraft operations. It can also accommodate vertical replenishment (VERTREP) – including with the MV-22.

IMPACT: The JHSV enables rapid closure of forces to the seabase from advanced and intermediate bases maneuver of combat ready forces in appropriate threat environments to in-theater austere or degraded ports and at-sea logistics movement from afloat prepositioning force (APF) and maritime prepositioning ships (MPS). JHSV can be used to support theater security cooperation, HA/DR, non-combatant evacuation, and other missions.

CURRENT STATUS: JHSV is a fully funded program to build 10 JHSVs (2 of which have already been delivered). The lead ship, USNS SPEARHEAD (JHSV-1), completed Initial Operational Test and Evaluation (IOT&E). The Office of Naval Research (ONR) has funded an Interface Ramp Technology (IRT) project designed to enable at-sea interface with an RRDF and Mobile Landing Platform (MLP) in a 1 to 4 feet significant wave height (SWH) in sea state 3 (SS3). The current plan is to install the IRT ramp on a JHSV for follow-on testing and evaluation.

Marine Corps Task List (MCTL):

1.12.5- Conduct Seabasing Operations; 4.1.2.4- Conduct Distribution Operations.

Universal Naval Task List (UNTL):

1.5.2.2.3- Buildup the Force.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

4.1- Logistics, Deployment & Distribution; Move the Force; Sustain the Force.



MPF MLP (Mobile Landing Platform)

BACKGROUND: The Mobile Landing Platform (MLP) is based on commercial float-on/float-off (FLO/FLO) technology to provide a surface interface between large medium-speed roll-on/roll-off (LMSR) prepositioning ships and landing craft air cushion (LCAC) surface connectors. The MLP is a major component to the Navy-Marine Corps strategy for enhancing Maritime Prepositioning Squadrons (MPSRONs) throughput capability by expanding operating environments and access opportunities. The MLP is approximately 785 feet in length with a beam of 165 feet—more than a third wider than most ships—making it an extremely stable platform for sea-based operations. MLPs 1 and 2 will provide an elevated vehicle staging area and three LCAC lanes (barriers, lighting, wash-down, and fueling services) to allow for transfer of equipment at sea in non-anchorage depths and delivery from over-the-horizon (OTH) through restricted access environments.

REQUIRED CAPABILITY: Seabased Enabling (SE) platforms conduct at-sea closure, arrival and assembly, employment, persistent sustainment, recovery, and reconstitution of the MAGTF from MPF platforms in support of global expeditionary seabasing operations.

IMPACT: MLP will provide the Combatant Commanders (COCOMs) and Joint Force Commanders a highly flexible operational and logistics support capability to meet widely varied expeditionary missions.

CURRENT STATUS: USNS Montford Point (MLP 1), the first mobile landing platform class ship, has successfully completed acceptance trials. MLP 1 is expected to be fully operational in fiscal year 2015. USNS John Glenn (MLP 2) and USNS Lewis B. Puller (MLP 3), the second and third MLP-class ships respectively, are currently under construction at General Dynamics National Steel and Shipbuilding Company (NASSCO) in San Diego, California. MLP 2 will be assigned to MPF.

Marine Corps Task List (MCTL):

1.12.3- Conduct Prepositioning Operations; 1.12.5- Conduct Seabasing Operations; 4.1.2.4- Conduct Distribution Operations.

Universal Naval Task List (UNTL):

1.5.2.2.3- Buildup the Force.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Assemble; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

4.1- Logistics, Deployment & Distribution, Move the Force, Sustain the Force.



MPF Seabasing Enabling (SE) Modular Block Upgrades

BACKGROUND: Seabasing Enabling platforms have recently been or will be added to the MPF Program: large medium-speed roll-on/roll-off, mobile landing platform (MLP) (FY15), and dry cargo/ammunition (T-AKE). The MLP is based on commercial float-on/float-off (FLO/FLO) technology to provide a surface interface between the LMSR and landing craft air cushion (LCAC) surface connector. The MLP is a major component to the Navy-Marine Corps solution for enhancing Maritime Prepositioning Squadrons (MPSRONs) throughput capability by expanding operating environments and access opportunities. The MLP is approximately 785 feet in length with a beam of 165 feet—more than a third wider than most ships—making it an extremely stable platform for sea-based operations. MLP 1 and 2 will provide an elevated vehicle marshalling/staging area and three LCAC lanes (barriers, lighting, wash-down, and fueling services) to allow for transfer of equipment at sea in non-anchorage depths and delivery from over-the-horizon (OTH) through restricted access environments. The LMSR has an excess of 300,000 square foot capacity, carries vehicles, equipment, 20-foot equivalent unit (TEU) containers, and is equipped with a helicopter landing spot, all used to support maritime prepositioning missions across the range of military operations (ROMO). The T-AKE possesses over 900,000 cubic feet for cargo space and has a helicopter operating spot and hanger available in support of operations across ROMO.

REQUIRED CAPABILITY: Interoperability with a full range of connectors available in the seabase will increase throughput, enhancing employment, selective offload, and sustainment capabilities to eliminate MLP reliance on LCAC as the single interface capability when conducting ship-to-shore operations. Displacement craft interface will provide greater flexibility in surface connector operations in the seabase. The MLP will not be limited to air cushioned craft and will be capable of using the full range of connectors available from Navy, Army, and coalition forces. Across the board interoperability with vertical connectors that operate in the seabase will improve platform

interface, enhance employment, allow selective offload, and sustainment capabilities ashore.

IMPACT: Interoperability is key to seabasing. The lack of Interoperability between platforms and connectors, both vertical and surface, within the seabase is detrimental to future maritime operations. Enhanced surface and vertical connector interoperability will improve the flexibility of all the platforms. Seabasing operations will be further degraded without enhancements to platform capabilities. Without crane enhancements, there are limitations to conducting Lo/Lo operations with displacement craft due to sea state limitations. Vertical support to the MAGTF is limited due to a lack of consistent aircraft certification across all platforms. Additionally, a lack of Interoperability with displacement craft further exacerbates limited berthing which could be mitigated through platform integration.

CURRENT STATUS: MLP 1 IOT&E scheduled for July – September 2014, RDT&E scheduled for October 2014. MPF MLP interoperability with displacement craft is a key Seabasing Enabled Integration Objective.

Marine Corps Task List (MCTL):

1.12.3- Conduct Prepositioning Operations, 1.12.5- Conduct Seabasing Operations, 4.1.2.4- Conduct Distribution Operations

Universal Naval Task List (UNTL):

1.5.2.2.3- Buildup the Force

Warfighting Functions:

Maneuver, Logistics,

Seabasing Lines of Operation:

Close, Assemble, Employ, Sustain, Reconstitute

Joint Capability Area (JCA):

4.1.1- Logistics, Deployment & Distribution, Move the Force;
4.1.2- Logistics, Deployment & Distribution, Sustain the Force



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Table 1. MPF Seabasing Enabling (SE) Modular Block Upgrades (as of Oct 2013)

REQUIREMENT	PLATFORMS	Estimate Cost (\$ Millions)	FUNDED*
SOF/SPMAGTF: Aviation Ordnance Magazine	T-AKE	\$0.5	UFR
Plug and Play C2	T-AKE, MLP, LMSR, JHSV	\$2.0	UFR
JHSV at-sea Transfer to MLP in SS3	JHSV	\$5.0	UFR
Rotary Wing Aircraft Certifications Level II	MLP, LMSR, T-AKE	\$3.0	UFR
Organic Connector basing on MLP	MLP	\$1.4	UFR
LMSR Crane Upgrade to SS3 with COTS Crane	LMSR	\$2.0	UFR
T-AKE Cranes Upgrade to SS3 with COTS Crane	T-AKE	\$2.0	UFR
MLP Cranes Upgrade to 25K STON for Lo/Lo Ops	MLP	\$1.0	UFR
MLP Cranes Upgrade to SS3 with COTS Crane	MLP	\$2.0	UFR
MLP Small Berthing Barge	MLP	\$4.2	UFR
MLP Medium Berthing Barge	MLP	\$35.0	UFR
MLP Large Berthing Barge	MLP	\$40.0	UFR
MLP Medical Support Module	MLP	\$0.6	UFR
MPF Dynamic Positioning	LMSR, T-AKE	Unknown	UFR
MLP Underway Replenishment	MLP	\$3.0	UFR
MLP At-sea Transfer	MLP	\$2.1	UFR
RRDF-LCAC Interface	INLS	Unknown	UFR
Weather Deck to Flight Deck Access Ramp	Watson Class LMSR	\$0.7	UFR
INLS Embarkation/Interface	MLP	Pending Engineering Feasibility Study	UFR
MPF UB	T-AKE, MLP	Pending Engineering Feasibility Study	UFR
ABLTS Interface	T-AKE	Pending Engineering Feasibility Study	UFR

*UFR is an unfunded requirement



Afloat MAGTF C4 Capabilities

BACKGROUND: The required afloat Command, Control, Communications, and Computers (C4) capabilities to support maritime and amphibious operations across the Range of Military Operations (ROMO) are critical. The increased reliance on information superiority, extended battle space and increased cyber threats demand a flexible, robust and protected domain capable of enabling all warfighting functions. The brisk evolution of technology dictates that the enterprise rapidly inserts next generation solutions to support the warfighter. The chasm between afloat and ashore capabilities continues to exist and in some cases is expanding.

Since 1992, the Marine Corps has published these requirements in various formats. The 2013 Afloat MAGTF C4 Required Capabilities (AMC4RC) letter maps gaps and capabilities to the required solutions and/or services. Produced annually, this letter articulates priorities to inform Navy and Marine Corps POM funding cycles.

REQUIRED CAPABILITY: The capabilities and services as put forth in the 2013 AMC4RC.

IMPACT: Afloat networks continue to degrade and become obsolete faster than they can be upgraded or refreshed. This impacts all facets of Command and Control (C2) (e.g. Common Operational Picture/Common Tactical Picture situational awareness; Intelligence, Surveillance and Reconnaissance (ISR) receipt and dissemination; etc.) for embarked USN & USMC elements. Degraded shipboard networks are impacting operations as reported by the deploying ARG/MEUs. Consolidated Afloat Network and Enterprise Network Services (CANES) will provide network upgrades, enterprise services (chat, eMail, internet, and video) increased network security, and virtualization in a capable afloat network environment.

MILSAT (Military Satellite) communications is the primary secure means for Over-the-Horizon (OTH) and Beyond Line of Sight support to theater, strategic, and

tactical warfighting operations. The Navy Multiband Terminal (NMT) will provide critical, high throughput (bandwidth) communications especially relevant to independent, disaggregated, and special operations. If not funded, individual afloat platform capability to leverage reach-back support, exploit ISR products, synchronize effects in a Joint environment and perform basic logistics and administrative functions will be extremely limited.

COMSAT (Commercial Satellite) communications provide redundancy, survivability, and surge support to the Naval forces. If the Commercial Broadband Satellite Program (CBSP) is not funded, afloat capability to leverage reach-back support, exploit ISR products, synchronize effects in a Joint Environment and perform basic C2 and administrative functions will be extremely limited.

HF-SAR (High Frequency - Shipboard Automatic Link Establishment Radio) is used for non-satellite, over-the-horizon (OTH) voice and data communications to request air support, control maneuver, perform reconnaissance, coordinate fires & effects, and coordinate logistics during the advanced force and assault phases of an amphibious operation, across the continuum of conflict. HF-SAR is the only voice and data, single-system OTH capability in a satellite communication (SATCOM) denied or congested environment.

EMUT (Enhanced Manpack Ultra-High Frequency (UHF) Terminal) supports voice and data satellite communications from the MAGTF afloat C2 spaces (Landing Force Operations Center (LFOC), Tactical Logistics (TACLOG), etc.) to static and on-the-move maneuver (mounted and dismounted) forces ashore. If EMUT is not installed, there is no dedicated afloat



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Landing Force SATCOM, thereby limiting afloat MAGTF means and options of command and control.

Iridium Antenna and infrastructure installation will allow the embarked landing force to transmit and receive Iridium phone calls and send or receive limited data directly from inside the Troop Operations compartment and/or LFOC. Iridium telephone provides an independent capability separate from the existing ship telephone system and networks. It provides communications in the event of shipboard power, telephone, network, or satellite outages. This provides dedicated, reliable access to commercial telephone, Defense Switch Network (DSN) and secure voice communications while maintaining situational awareness from operational spaces.

Tactical Blue Force Situational Awareness, or Joint Battle Command - Platform (JBC-P), enables Warfighters to share a common operating picture of the battlefield and allows the Warfighter to exchange Position Location Information (PLI) and tracks, graphic overlays, tactical chat, and to gain access to terrain maps, logistics information and other data securely. Most importantly, JBC-P provides a joint, shared Situational Awareness (SA) display indicating the identification, location and movement of friendly and enemy units.

Landing Force Terrestrial Communications provide non-satellite dependent, high throughput Line-of-Sight

(LOS) and Beyond-Line-of-Sight (BLOS) means of command and control. This capability is especially critical in an Anti-Access, Area-Denial (A2AD) environment. Terrestrial communications enable collaborative planning, ISR/FMV distribution and secure voice, video & data within the battle group. Terrestrial communications need to be maintained and upgraded to enhance C4ISR capabilities across the ARG/ATF, increase joint interoperability and reduce traffic loads on shipboard SATCOM systems.

CURRENT STATUS: 2013 AMC4RC was signed by DC, CD&I on 30 September 2013 and submitted to OPNAV N2/6.

Marine Corps Task List (MCTL):

As referenced in the 2013 AMC4RC and AMR spreadsheet.

Universal Naval Task List (UNTL):

As referenced in the 2013 AMC4RC and AMR spreadsheet.

Warfighting Functions:

Command & Control; Fires; Maneuver; Logistics; Intelligence; Force Protection; Cyber.

Line of Operation:

Close; Assemble; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

As referenced in the 2013 AMC4RC and AMR spreadsheet.



MV-22B Aviation Certification

BACKGROUND: MV 22 is the medium lift aircraft replacing the CH-46E. It is vital for long range, medium lift, multi-missions, and is capable of conducting combat operations, combat support, combat service support, and special operations missions. The MV 22 is a critical component of the Marine Corps' vertical connector strategy for ship-to-ship, ship-to-shore, and ship-to-objective maneuver.

REQUIRED CAPABILITY: The Marine Corps requires the MV 22 to be certified on all expeditionary ship classes to include: L Class amphibious warfare ships: LHD, LHA, LPD, LSD, LX (R); MPF ships: T-AK, T-AKR, T-AKE, MLP; and Support ships: T-AVB, T-AH, LCC, JHSV.

IMPACT: Integration of this capability provides commanders significant flexibility through operational reach, speed, and endurance supporting forces afloat/ashore. Without MV 22 certifications CCDRs are limited in employment options necessary for the projection and sustainment of forces ashore in an A2AD maritime environment. MV 22 certification on all expeditionary ship classes will increase the flexibility and operational reach of the MAGTF.

Current Status: See Table below for current status. This table is the HQMC Prioritized list as of Oct 2013 and reflects the current progress that NAVAIR has taken to certify all ships to include Combatant ships for MV/CV-22 operations.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.3- Conduct Prepositioning Operations; 1.12.5- Conduct Seabasing Operations; 1.3.3.3.1- Conduct Aviation Operations from Expeditionary Sea-Based Sites.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations; 1.1.2.3.3- Conduct Flight Operations.

Warfighting Functions:

Fires; Maneuver; Logistics.

Line of Operation:

Close; Employ; Sustain; Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Engage, Insert, Influence, Secure (Air).

Table 2. MV-22B AVIATION CERTIFICATION CURRENT STATUS LIST (as of Oct 2013)

Priority	Ship Class	Capability	Status	Notes
1	LHA 6	L, V	In Progress	Will be treated as an in-service ship; SCD in development
2	LHA 7	L, V	In Progress	Attempting to modify flight deck designs prior to construction
3	LPD 17	L, V	In Progress	Looking into structural solutions for unmitigated operations
4	T-AH 19	L, V	In Progress	MSC Currently reviewing detailed Flight Deck Designs
5	T-AKE 1	L, V	Complete	
6	T-AVB 3	L, V	In Progress	90-minute Nacelle modulation acceptable; awaiting final report
7	LCC 19	L, V	In Progress	Awaiting deck strength funding; VERTREP certification complete
8	T-AKR 300	L, V	In Progress	VERTREP Certification issued; no L/R
9	T-AKR 310	L, V	In Progress	VERTREP Certification issued; no L/R
10	MLP 1	L, V	Not Started	MLP Program removed V-22 as a capability; action required
11	T-AK 3008	L, V	In Progress	VERTREP Certification issued; no L/R
12	T-AK 3017	L, V	Not Started	
13	JHSV	V only	In Progress	Interim AVCERTS issued for Class 5 VERTREP on JHSV 1-2
14	AS 39	V only	Complete	III/5/2 VERTREP issued for both hulls
15	CG 47	V only	In Progress	PMA-275 researching L/R on these hulls
16	DDG FLT I	V only	In Progress	PMA-275 researching L/R on these hulls
17	DDG FLT II/IIA	V only	In Progress	PMA-275 NAVY IPT has funded FLT IIA Deck Strength study
18	DDG 1000	L, V	Not Started	
19	FFG 7	V only	In Progress	PMA-275 researching L/R on these hulls
20	LCS I	V only	In Progress	Currently Certifying Flight Decks for Class 5 VERTREP
21	LCS II	V only	Not Started	Requires Thermal Analysis for VERTREP (Aluminum flight deck)
22	T-AK 32	V only	Not Started	
23	T-AO 187	L, V	In Progress	VERTREP Certification issued; no L/R
24	T-AOE 6	L, V	In Progress	VERTREP Certification issued; no L/R



Lithium Ion (Li-Ion) Battery

BACKGROUND: The Joint Strike Fighter (JSF) is the first aircraft program of record introducing large quantities of large format lithium batteries. The unique nature and hazards associated with large format lithium batteries requires specifically designed infrastructure, supporting facilities, and supply procedures to properly maintain such batteries and contain any battery malfunctions.

REQUIRED CAPABILITY: The Marine Corps requires the capability to transport, stow, maintain, and operate with large format li-ion batteries and associated chargers onboard amphibious warfare and Maritime Prepositioning Force (MPF) ships. Marine Corps units that embark lithium ion batteries aboard L-Class, JHSV, and MPF ships must have the proper testing/validation of battery specifications and also ensure they will have adequate storage and charging facilities once embarked.

IMPACT: Lithium ion batteries pose a significant hazard to US Navy ships which must be accounted for in storage and containment system design. These batteries can violently vent or rupture, releasing large quantities of combustible, toxic or acidic vapors and aerosols that pose a risk to personnel, equipment, and ships. Additionally, a small explosion can occur due to manufacturing defects in battery insulating membranes which can cause overheating of the battery case creating very high temperature carbon particles to rapidly release. This can result in a major fire or explosion and the release of large quantities of toxic and acidic gases with heavy

smoke. Inability to properly store li-ion batteries aboard amphibious ships and MPF ships can limit the ability of embarked forces to fully deploy and employ from naval shipping.

CURRENT STATUS: Naval Sea Systems Command (NAVSEA) is developing a shipboard Hazard Mitigation Suite for large format lithium batteries to maintain and contain the hazards associated with these batteries. Projected quantities of batteries and chargers to be embarked are needed in order to define the required number of storage and charging lockers and determine volume requirements to properly size the lithium battery shops and influence shipboard design and arrangements.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations; 1.3.3.3.1- Conduct Aviation Operations from Expeditionary Sea-Based Sites.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations; 1.1.2.3.3- Conduct Flight Operations.

Warfighting Functions:

Fires; Maneuver; Logistics.

Seabasing Lines of Operation:

Employ; Sustain.

Joint Capability Area (JCA):

3.1- Maneuver to Engage, Insert, Influence, Secure (Air); 4.3 Maintain.



Armory/Weapon Storage: Amphibious Ships

BACKGROUND: After action reports from recent deployments and exercises have highlighted the challenges associated with weapons stowage and maintenance aboard amphibious shipping. Shipboard armory spaces and their associated weapon racks have not kept pace with Marine Corps weapon systems development and fielding, thus impacting the readiness of embarked forces. This problem exists in all L-Class ship weapons stowage areas. Currently a commercial off the shelf solution (COTS) is being pursued; however arms, ammunition, and explosives (AA&E) security policy blocks an easy solution/funding. Naval Sea Systems Command (NAVSEA) has pursued an inexpensive option to alter LSD small arms armories. HQMC CD&I is drafting a requirements letter to seek a solution for both amphibious ships and military sealift ships.

REQUIRED CAPABILITY: Marine Forces embark, deploy and are employed with several types of individual and crew served weapons and their associated components and maintenance kits. The Marine Corps requires armory/weapon storage facilities aboard amphibious ships that will fit all classes and configuration of Marine operated weaponry.

IMPACT: Current armory configurations require disassembly of individual weapons systems for storage, which significantly affects the ability to maintain Battle Sight Zero (BZO). BZO is the proper calibration of the weapon system to the individual Marine and is required to ensure the shots impact where they are aimed. Mission success is predicated on proper stowage and maintenance of critical weapons systems. Integration and calibration of optics, sighting devices and handling systems must remain constant for their immediate retrieval from stowage and employment in order to reduce risk.

CURRENT STATUS: HQMC CD&I is staffing a requirements letter to provide a list of weapon systems, with specifications and dimensions used by embarked Marines, that provides baseline threshold weapon density stowage requirements by compartment for LHD, LHA(R), LPD 17, LSD class ships, and MPF ships. Stowage solutions should inherently optimize critical space allocation; provide a degree of flexibility and modularity to secure weapons of various heights and widths and accommodate variation of unit weapons load outs and fact of life changes in weapons systems; and allow for stowage in an operational configuration without risk of damage when subjected to a dynamic (shock and vibration) maritime environment. POM: None at this time.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations; 4.1.2.3.1- Provide Munitions Supply and Storage.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations. 4.3- Repair and Maintain Equipment.

Warfighting Functions:

Fires; Logistics.

Seabasing Lines of Operation:

Close; Assemble, Reconstitute.

Joint Capability Area (JCA):

4.2.3- Store Equipment and Supplies.

:



Heavy Underway Replenishment (UNREP): LHD 1 – LHA 7 (JSF Engine Modules)

BACKGROUND: The JSF Engine and its modules weight exceed current LHD 1 through LHA 7 ability to replenish at sea. The weight of Power Module and assembled Engine exceed connected replenishment-at-sea (CONREP) lifting capability. The dimensions of the power module in a container and lift fan do not fit in CONREP hatch.

REQUIRED CAPABILITY: The Marine Corps requires the LHD 1 – LHA 6 class ships to have a replenishment-at-sea capability using both Vertical and Connected Replenishment Systems. Connected replenishment (CONREP) shall be for fueling-at-sea via a span-wire and sending light cargo up to 600 lbs and receiving cargo up to 6,000 lbs. Dry stores transfer (receive only) capability is equivalent to heavy lift CONREP Station capable of receiving loads up to 12,000lbs.

IMPACT: Mission Readiness of F-35Bs at risk if unable to replenish JSF Engine Modules at sea.

CURRENT STATUS: Heavy lift underway replenishment (UNREP) has been determined as a feasible requirement to incorporate in the large deck amphibious ships. Due to ship stability issues for LHD 1-8 (and possibly LHA 8) when exercising Heavy UNREP, portside weight compensation is required for those platforms. Currently PMS 470 and Naval Surface Warfare Carderock (NSWC PHD) have been tasked to complete an engineering study and cost estimates. PMS 470 and NSWC PHD will need to conduct a stability impact analysis for LHD 1 through LHD 8, as well as test the proposed material handling equipment (MHE) in existing CONREP stations. This will require a coordinated effort with Team Ships

and the JSF Joint Program Office. It has been recommended to capitalize off of LHA (R) Flt 1 analysis, currently in contract design and expected to complete in fiscal year 2014. The Air Ship Integration (ASI) Executive Committee (EXCOMM) led by NAVAIR conducted a study in June 2013 which established the way ahead. The focus of the JPO over the next several months is on the final power module canister design which will affect Heavy UNREP procedures and determine what weight compensation requirements exist, as well as the F-35B Global Support concept of operations (CONOPS). Additional task are to identify and test the MHE, and identify costs to modify the Amphibious and Combat Logistics Force (CLF) ships. The goal is to complete engineering and cost analysis and perform a comparative business case analysis for a decision by the October 2013 ASI EXCOMM.

Marine Corps Task List (MCTL):

4.2.1- Conduct Aviation Maintenance Operations.

Universal Naval Task List (UNTL):

4.3- Repair and Maintain Equipment; 4.6.3- Provide Underway Replenishment.

Warfighting Functions:

Fires, Logistics.

Seabasing Lines of Operation:

Sustain.

Joint Capability Area (JCA):

4.3- Maintain Equipment.



S&T Advanced Mooring System (AMS)

BACKGROUND: One of the most difficult challenges facing forces conducting sea-based operations is the need to bring ships, vessels, craft, and lighterage together in order to transfer personnel, equipment, and cargo from one platform to another in less than ideal weather conditions. The AMS under development by the Office of Naval Research (ONR) in partnership with Program Executive Office (PEO) Ships and Navy Facilities Engineering Command Sealift Support Program Office (NAVFAC SSPO) enables frequent, safe, and fast mooring at sea with minimal manpower (no line handling). When installed on the Mobile Landing Platform (MLP) or other ships it facilitates their use as a hub for transfer of materials, equipment, payloads, mission packages, and personnel.

REQUIRED CAPABILITY: An easily transportable system for at-sea mooring.

IMPACT: AMS will help sea-based forces quickly & safely moor connectors and high flare container ships to the MLP in high sea states. In addition to enhancing deck crew safety, AMS significantly widens the operating envelop for force closure, arrival and assembly, employment, sustainment, and reconstitution.

CURRENT STATUS: AMS is approximately halfway through its five year development program by ONR. It completes its S&T phase in FY15 after which it starts its Research and Development (R&D) development phase under the Strategic Sealift R&D program.

S&T Gap:

FY11-33, At-Sea Assembly, Adaptive Force Packaging, Continuous Movement and Sustainment of Combat Power Ashore

Marine Corps Task List (MCTL):

1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2.2.3- Buildup the Force.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Assemble; Employ; Sustain, Reconstitute.

Joint Capability Area (JCA):

4.1.3- Deploy the Force.



S&T Interface Ramp Technology (IRT)

BACKGROUND: The Joint High Speed Vessel (JHSV) is a critical surface connector, linking intermediate staging bases (ISBs), ships of the seabase, and forces operating ashore. The JHSV—as currently delivered—is limited in its ability to affect those connections in all but the lowest sea states. In order to enhance its ability to transfer personnel, equipment, and cargo within the seabase in more adverse environmental conditions the JHSV needs a more capable ramp. In response to this need, the Office of Naval Research (ONR) in partnership with the Program Executive Office (PEO) Ships is developing the JHSV Interface Ramp Technology.

REQUIRED CAPABILITY: An advanced, lightweight, cost-effective ramp system for the JHSV capable of sea state 3 (threshold) and sea state 4 (objective) operations. The current JHSV ramp is limited to sea state 1 operations.

IMPACT: The improved Interface Ramp Technology (IRT) ramp will enable the JHSV to offload quickly and efficiently in higher sea states within the seabase and at the austere ports and quay walls common in developing countries.

CURRENT STATUS: ONR's IRT effort will complete its Science & Technology phase in late 2014 after which it will

transfer to PEO Ships for further R&D grooming before installation on JHSV-4 (USNS FALL RIVER). Installation of IRT ramps on additional JHSVs is part of an ongoing discussion within the Navy. The Marine Corps will continue to explore JHSV IRT enhancements to achieve the capability necessary to conduct in-stream launch of current and emerging Amphibious Assault Vehicles.

S&T Gap:

FY06 / Gap #24; connectors and interfaces to support the transport of personnel, equipment and logistics to/from the seabase

Marine Corps Task List:

1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2.2.3- Buildup the Force.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Assemble; Employ; Sustain, Reconstitute.

Joint Capability Area (JCA):

4.1.3- Deploy the Force.



S&T Environmental Ship Motion Forecasting (ESMF)

BACKGROUND: Introduction of Mobile Landing Platforms (MLPs) to the fleet opens a new era for a U.S. Navy not comfortable with bringing ships together and mooring at sea for ship-to-ship transfer of personnel, equipment, and cargo. The ESMF system is being developed in an attempt to better inform ship captains and crews so that Seabasing operations can be conducted as safely as possible in a broader range of environmental conditions.

REQUIRED CAPABILITY: A decision support tool that forecasts wave motion and ship motion in response to wave motion. The tool will help ship captains, masters, and their deck crews determine whether it is prudent and safe to conduct ship-ship transfer of people, equipment, and cargo. ESMF's components include a wave radar and a computer that distributes environmental and ship motion information to operators throughout the ship.

IMPACT: ESMF significantly increases the safety of inter- and intra-ship operations while also extending the operating environment for various missions. ESMF's ability to predict ship motions will significantly increase the safety of operations between two vessels conducting cargo transfer at sea (LMSR/MLP, MLP/LCAC, etc.). It extends operational environment for various missions by predicting periods of time

or ship headings where cargo movement may be conducted despite sea states that "exceed limits" of equipment (ship motions vs. sea state).

CURRENT STATUS: ONR will complete its ESMF S&T phase in 2015, after which PEO Ships will continue development and testing. Decisions on which ships will benefit from ESMF have been deferred until the technology is tested and validated.

S&T Gap:

FY11-33, At-Sea Assembly, Adaptive Force Packaging, Continuous Movement and Sustainment of Combat Power Ashore.

Marine Corps Task List:

1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2.2.3- Buildup the Force.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Assemble; Employ; Sustain, Reconstitute.

Joint Capability Area (JCA):

4.1.3- Deploy the Force.



S&T Ultra Heavy-lift Amphibious Connector (UHAC)

BACKGROUND: UHAC is an ONR initiative to mature and refine technologies for use in future watercraft development programs. A displacement craft with buoyancy and propulsion provided by an innovative captive air-cell technology, a future full scale UHAC would have up to three times the payload of the Ship-to-Shore Connector (SSC) and approximately the payload of a 1600-series Landing Craft Utility (LCU). It would have the same well deck footprint as an SSC with speeds twice that of an LCU. The captive air cell technology also yields a low ground pressure footprint (less than 2 psi) giving it the ability to traverse mud flats or climb over obstacles in excess of 10 feet. With a projected range of over 200 miles, UHAC could deliver forces and sustainment from well over a horizon.

REQUIRED CAPABILITY: Development of amphibious craft technologies yielding three times the lift capacity of the Ship to Shore Connector (SSC; LCAC replacement) at twice the speed of the Landing Craft Utility (LCU) with much greater coastal access than either the SSC or the LCU. Technologies developed under the UHAC program will be used in the design of future ship-to-shore connectors.

IMPACT: Future surface connectors with UHAC's speed, payload, range, and ability to operate to and through a beach gives MAGTF commanders a significant improvement in force projection ashore.

CURRENT STATUS: ONR and an international partner have successfully demonstrated UHAC's potential with fifth- and half-scale demonstrators. Testing and technology development continues through a variety of funding sources. The Marine Corps Warfighting Lab is sponsoring a half-scale UHAC demonstration during their 2014 Advanced Warfighting Experiment (in conjunction with RIMPAC 2014). ONR product managers are currently working with a number of DOD agencies to secure funding for future product development. Development of a full-scale technology demonstrator is a possibility.

Marine Corps Task List (MCTL):

1.12.1- Conduct Amphibious Operations; 1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2- Conduct Amphibious Operations, 1.5.2.1 Conduct Ship-to-Shore or Ship-to Objective Maneuver.

Warfighting Functions:

Maneuver, Logistics.

Seabasing Lines of Operation:

Close, Employ, Sustain, Reconstitute.

Joint Capability Area (JCA):

3.1- Force Application, Maneuver to Engage, Insert, Influence, (Maritime); 4.1- Logistics, Deployment & Distribution, Move the Force; Sustain the Force.



S&T Large Vessel Interface Lift On/Lift Off (LVI LO/LO)

BACKGROUND: Currently, container ships must have a safe, deep-water port to be unloaded. By adding the Large Vessel Interface Lift On / Lift Off (LVI LO/LO) crane technology, container ships can be offloaded at sea with the containers transferred to other modes of transportation for the final transport to shore. This capability reduces the need for secure deep-water ports and enables the flow of containerized logistics through the seabase to forces operating ashore.

REQUIRED CAPABILITY: An advanced, motion-compensated, at-sea cargo transfer system that enables transfer of fully-loaded cargo containers between ships and vessels in sea state 4 and below.

IMPACT: The fully developed technology gives the warfighter the ability to move containerized logistics through the seabase without having to secure a deep water port for container ship off-loading. This capability greatly increases the potential throughput of the seabase and provides a key logistical enabler for support of a joint task force operating ashore.

CURRENT STATUS: LVI LO/LO completed its S&T phase in 2011. The technology continues to be refined and tested by PEO Ships.

Marine Corps Task List:

1.12.5- Conduct Seabasing Operations.

Universal Naval Task List (UNTL):

1.5.2.2.3- Buildup the Force.

Warfighting Functions:

Maneuver; Logistics.

Seabasing Lines of Operation:

Close; Assemble; Employ; Sustain, Reconstitute.

Joint Capability Area (JCA):

4.1.3- Deploy the Force.



ATTRIBUTES OF THE FUTURE FORCE

Expeditionary Force in Readiness

- ❖ Deployed forward for deterrence and proximity to crises
- ❖ Poised and ready for rapid crisis response, with no tiered readiness
- ❖ Conduct operations under very austere conditions
- ❖ Self-sustaining in an expeditionary environment
- ❖ Leverages assets for rapid employment

Naval Forces

- ❖ Leverage sea as maneuver space
- ❖ Integrated into a larger naval enterprise
- ❖ Preserves core amphibious competencies

Middleweight Force

- ❖ Light enough for rapid employment
- ❖ Heavy enough to prevail against threats in littorals
- ❖ Command and control operations up to MEF

Forcible Entry in Depth

- ❖ Capable of operational impact early
- ❖ Aggregates two forcible entry brigades from the sea
- ❖ Allows for strategic flexibility and asymmetric advantage

Integrated Combined Arms Force

- ❖ Designed for combat employment as MAGTF
- ❖ Not every employment will include every function

Modern Force

- ❖ Preserves qualitative edge over its opponents
- ❖ Leverage technology and ISR to fight with precision
- ❖ Integrates aviation, fires, mobility and logistics

Leading Edge of Joint Force

- ❖ Facilitates integration of GPF and SOF capabilities
- ❖ Integrates into joint force air and logistics operations in sustained conflict

Force Biased for Action

- ❖ Agile: meets the needs of Geographic Combatant Commanders
- ❖ Standing MAGTF HQs for immediate employment
- ❖ Maintains a 1:2 deploy/dwell
- ❖ Integrates Reserve capabilities across a wide range of contingencies
- ❖ Trained to full range of missions
- ❖ Inherently adaptive but comprehensively trained

