HEADQUARTERS MARINE CORPS

PREPOSITIONING PROGRAMS HANDBOOK

Appendix F to Marine Corps Installations & Logistics Roadmap (MCILR)

3rd Edition

2015

GLOBAL COVERAGE • FORWARD PRESENCE • CRISIS RESPONSE

United States Marine Corps

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FOREWORD

The future operating environment will continue to be characterized by national and international challenges that will stretch the employment capacity of the US military and demand a force in readiness with capabilities for a global response. We must expect a security landscape characterized by volatility, instability, complexity and access challenges across all domains. The solution to today's problem requires the ability to fight across all domains in a holistic, coordinated manner along with the ability to project power and control the sea. The readiness, rapid responsiveness, flexibility, precision and strategic mobility of naval forces are essential to ensuring continued access and security in the global commons and the littoral regions that border them. As the Nation prepares for an uncertain future, the Naval Services provide essential capabilities to deter conflict, build alliances, deny sanctuary, enable influence and, when required, project power against increasingly lethal and asymmetric adversaries.

The United States of America is a maritime nation. As a global power it employs seapower to protect US interests, shape a favorable security environment, foster global security and prosperity, signal US resolve, defend the homeland, and win decisively when required.[1] The Marine Corps as a naval, expeditionary force-in-readiness provides "flexible and sustainable options from sea to the littoral" for executing the essential naval functions: all domain access, deterrence, sea control, power projection, and maritime security.[2] As the Nation's expeditionary force in readiness the American people expect the Marine Corps to respond quickly and to win; to do what must be done in "any clime and place" and under any conditions. These attributes will continue to shape the Marine Corps' ethos, culture , organization, training, equipment, and priorities.

Marine Corps prepositioning is a global coverage capability that is enabled by its

[1]A Cooperative Strategy for 21st Century Sea Power (CS21R), March 2015, pgs. 9 and 19.
[2]CS21R, pg. 19.

inherent mobility and strategic laydown. Our current prepositioning operational capabilities can support limited steady state operations which are inclusive of forward presence. The objectives of forward presence being "the recurring dividends of 'soft power' applied with a richer military dimension; the deterrent effect of immediate, credible, and effective action to thwart potential adversaries; and the expanded operational reach and tactical flexibility to defeat foes throughout the littorals."[3] Crisis response is a critical enabler for US power projection of the right forces in the right place at the right time. Prepositioning supports the Marine Corps doctrine for rapid employment of expeditionary forces. It includes both afloat and ashore programs that are forward sited to reduce reaction time in providing combatant commanders (CCDRs) with scalable, tailorable Marine Air-Ground Task Forces (MAGTFs) to address limited objective missions for a short duration across the range of military operations (ROMO).

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[3]Expeditionary Force 21 (EF21), 4 March 2014, pg. 2 (Forward).

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PURPOSE

The purpose and intent of this handbook is to highlight the operational and logistics aspects of the Marine Corps' prepositioning programs that have significant influence in determining the future type, quantity, configuration, and storage of equipment and supplies aboard MPF and MCPP-N. The future inventory is developed through a deliberate and coordinated planning process known as Tailoring.

Chapter 1 provides an overview of the MPF and the MCPP-N programs, the characteristics of each, and key logistics planning considerations. Chapter 2 discusses Marine Corps prepositioning program management and centers around the Tailoring process which includes applying Commandant of the Marine Corps (CMC) Planning Guidance to form the notional Force List (MCBul 3501), producing the Prepositioning Objective (PO) published in the NAVMC 2907, and planning for the loading of Maritime Prepositioning Ships (MPS) throughout the MPF Maintenance Cycle (MMC). This chapter also discusses the tools available to the prepositioning programs stakeholders that assist in the Tailoring process. Chapter 3 provides an overview of Marine Corps Logistics Command (MARCORLOGCOM) and Blount Island Command (BIC), their participation in the Tailoring process, and the execution of the MMC.

CHAPTER 1
MARINE CORPS PREPOSITIONING PROGRAMS

The Marine Corps Prepositioning Programs consists of the MPF and MCPP-N. Each provide combatant commanders select equipment and supplies to support MAGTFs up to the size of a MEB for up to 30 days when combined with the unit's Fly-in-Echelon (FIE) of organic supplies and equipment[1].

MARITIME PREPOSITIONING FORCE

OVERVIEW

The primary purpose of the MPF program is to enable the rapid deployment and engagement of a MAGTF anywhere in the world in support of our National Defense Strategy. This strategic capability combines the capacity and endurance of sealift, the speed of airlift, and forward positioned equipment and supplies to enable a rapid response capability[2]. The MPF concept has had a dynamic history of evolving to meet the changing needs of the geographic combatant commanders (GCC) while adapting to programmatic pressures including force structure reductions and tightening fiscal constraints. A synopsis of the evolution of the MPF Program, from its inception in the late 1970's to today's lean and flexible scalability, can be found in Appendix A.

CHARACTERISTICS

MPF Operations

An MPF operation includes the airlift of a MAGTF and Navy elements with selected equipment into an arrival and assembly area to join with equipment and supplies that are carried aboard MPS. More detail regarding the naval forces supporting MPF operations may be found in Appendix B.

An MPF operation may also consist of a Marine Expeditionary Force (MEF) interacting with more than one Maritime Prepositioning Ships Squadron (MPSRON). Figure 1 depicts the movement of an MPF MAGTF via the FIE to the Arrival and Assembly Area (AAA), the movement of the Offload Preparation Party (OPP) which prepares the MPS equipment and supplies for offload, and the movement of an MPSRON to the AAA for supplies and equipment offload. This offload may be executed at either a host nation port facility, or from seaward by means of

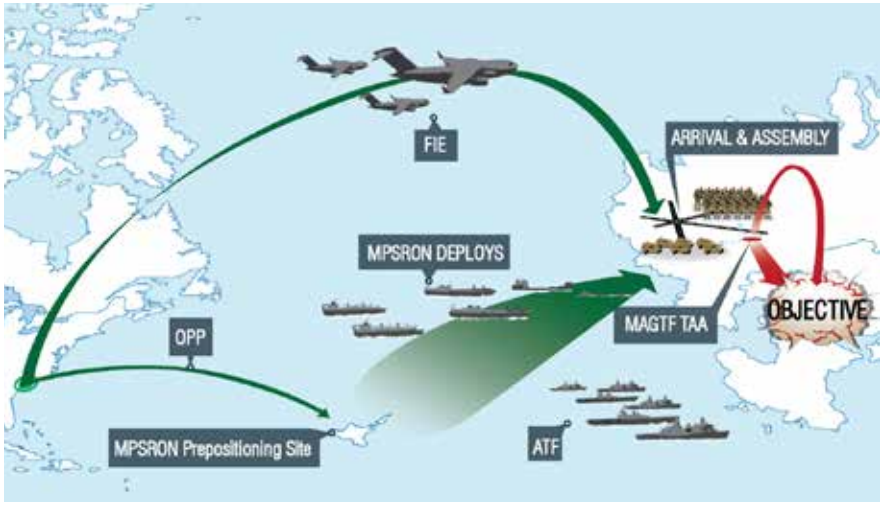
[1]Marine Corps Order 3000.17, Marine Corps Prepositioning Programs, dated Oct 2013

[2]Marine Corps War Fighting Publication (MCWP) 3-32, Maritime Prepositioning Force Operations dated 21 Nov 2011

an in-stream offload. The MAGTF then assembles with the offloaded equipment in the AAA and moves to their Tactical Assembly Areas (TAAs) from where they will advance toward the objective. Marine Corps MPF concept and employment differ from those of the sister Services. MPF is able to transition from a Major Combat Operation (MCO) focused capability to a more scalable option that supports limited employment through the selective offload of tailorable sustainment packages and at-sea transfer of personnel and equipment necessary to support conventional and Special Operations Forces (SOF). MPF provides a tailored employment option for low spectrum operations while retaining high end deployment capability, allowing MPF to be scalable across the full ROMO.

Integral to the success of an MPF operation are the actions of several organizations and units not depicted in the figure. The Survey, Liaison and Reconnaissance Party (SLRP) is deployed in advance of the MPF in order to evaluate the AAA before the arrival of MPS. The Logistics Combat Element's (LCE) Landing Force Support Party (LFSP) coordinates with the Navy Support Element's (NSE) Beach Party Team (BPT) to play a crucial role in MPF throughput. The Departure Airfield Control Group (DACG) is responsible for the throughput of personnel and equipment at the aerial port of embarkation (APOE) and the Arrival Airfield Control Group (AACG) is responsible for the same at the aerial port of debarkation (APOD). Each MSE also organizes Arrival and Assembly Operations Elements (AAOEs) that are orchestrated by the Arrival and Assembly Operations Group (AAOG) to ensure the proper distribution of supplies and equipment during the execution of arrival and assembly operations.

Figure 1 MPF Operation Overview



Squadron Composition

Figure 2 provides the composition of the two MPSRONs. MPSRON-2 is sited at Diego Garcia and MPSRON-3 is sited at Guam/Saipan. Although deployable anywhere around the world, only the MPSRON deployment stations are depicted.

Figure 2 MPSRON/Ship Composition and Deployment Stations

MPS assignment based on ACMC Decision Memorandum dtd 27 July 2012. Location and MPSRON composition subject to change based on service and operational requirements.

MPSRON 2 consists of: one BOB HOPE Class T-AKR (Large, Medium Speed, Roll-on/Roll/off Ships, also known as LMSRs), USNS SEAY; one WATSON Class T-AKR, USNS SISLER; two BOBO Class T-AKs (MPF Vehicle Cargo Ship), USNS BUTTON and USNS LOPEZ; one modified SHUGHART Class T-AK, USNS STOCKHAM; one LEWIS & CLARK Class T-AKE (Dry Cargo Ammunition Ship), USNS LEWIS & CLARK; and one Expeditionary Transfer Dock (ESD), USNS MONTFORD POINT[3].

MPSRON 3 consists of one BOB HOPE Class T-AKR, USNS PILILAAU; one WATSON Class T-AKR, USNS DAHL; three BOBO Class T-AKs, USNS BOBO, USNS WILLIAMS, and USNS LUMMUS; one LEWIS & CLARK Class T-AKE, USNS SACAGAWEA, and one ESD, USNS JOHN GLENN.

Application of MPF Across the ROMO

In an effort to improve utility of MPF for use below the full MPSRON level, HQMC conducted programmatic-level analysis on the feasibility of tailoring individual ships to support the use of Crisis Response Force Packages (CRFPs). Whereas a full MPSRON supports up to a MEB-sized force, these new CRFPs will enable deployment and employment of both a light and medium capability in order to provide a crisis response capability below the full MEB level. Individual

ESDs, MLPs are configured with the Core Capability Set and will be referred to "ESD" hereafter.

MPS will be tailored to support this initiative to the maximum extent possible within the limitations of the individual ship's capabilities and equipment availability.

The CRFP is not additive to the MEB table of equipment (T/E), but rather a subset of equipment and supplies packaged in a manner that maintains parity between MPSRONs, while providing operating forces with a scalable response based on specific mission requirements. The CRFPs are depicted in Figure 3. MPSRONs will be tailored to provide two light crisis response packages, a medium crisis response package, or a full MPSRON.

Figure 3 | Crisis Response Force Packages (CRFP)

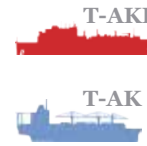
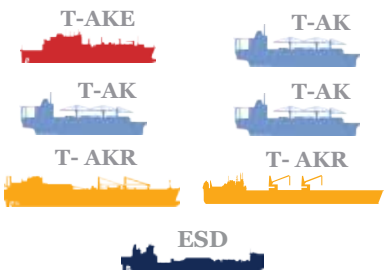
	CRFP Light -1	CRFP Light - 2
Ships		
FIE Force	~ 3,900 Pax	~ 3,000 Pax
Overview	*Force*	
	GCE: InfBn (rein) w/ LAVs, Tanks, Arty, AAVs	GCE: Inf Bn (rein) w/ LAVs, Tanks, Arty, AAVs
	LCE: DS CLB (Task-organized)	LCE: DS CLB (Task - organized)
	ACE: R/W on-call	ACE: R/W on-call
	CE: Force Recon ANGLICO	CE: CAG
	Sustainment	
	Force deploys with 3 DOS	Force deploys with 3 DOS
	DOS/DOA dependent on mission and MPS inventory	DOS/DOA dependent on mission and MPS inventory
	Mobility	
	2 Rifle Co (AAVs)	2 Rifle Co (MT)
	1 Rifle Co (MT)	1 Rife Co (AAVs)
	On-call ACE	On-call ACE
	Capability Sets	
	AAFS, TAFDS, Sec, HERS, GERS, Elec Water, Food, Hab, Med	AAFS, TAFDS, Sec, HERS, GERS, Elec, Water, Food, Hab, Med
	Navy Capability	
	3 CF, NSE, NCE	3 CF, 1 ABLTS, NSE
	Missions	
	Security, HADR, DSCA, NEO, Defense	Security, HADR, DSCA, NEO, Defense

Figure 3 | Crisis Response Force Packages (CRFP)

	CRFP Medium	CRFP Heavy (Full MPSRON)
Ships		
FIE Force	~ 7,500 Pax	~ 15,000 - 18,000 Pax
Overview	*Force*	
	GCE: (2) Inf Bn (Rein) w/ LAVs, Tanks, Arty, AAV LCE: DS CLB ACE: R/W On-call CE: Force Recon ANGLICO, CAG	MEB-sized force centered around Infantry Regiment
	Sustainment	
	Force deploys with 3 DOS DOS/DOA dependent on mission and MPS inventory	MPSRON deploys with up to 30 DOS (with FIE)
	Mobility	
	2 Rifle Co (AAV) 4 Rifle Co (MT) On-call ACE	1 Bn (AAV) 1 Bn (MT) 1 Bn (Air)
	Capability Sets	
	AAFS, TAFDS, Sec, HERS, ERS, Elec, Water, Food, Hab, EMF	All
	Navy Capability	
	8 CF, 1 ABLTS, NCE, NSE	11 CF, 2 ABLTS, NCE, NSE, RRDF
	Missions	
	Security, HADR, DSCA, NEO, Defense	Full ROMO

Capability Sets

In order to execute specific mission profiles across the ROMO, selected equipment and supplies have been grouped together in ISO containers or palletized on the T-AKE to create complete capability sets (e.g., all the fuel or water storage equipment co-located) and loaded in such a manner (e.g. on the weather deck or right below the hatch square) so they can be quickly accessed during offloads.

These capability sets vary according to their function, but contain necessary items that the arrival and assembly forces or advance parties need in the early stages of operations to facilitate the arrival and assembly of the MPF MEB. The containers are appropriately marked for quick identification. Appendix C provides a brief description of these capability sets and special stowage assets, and a matrix reflecting how they have been spread loaded across the MPSRONs.

Aviation Logistics Support

Marine Corps Warfighting Publication (MCWP) 3-21.2, Aviation Logistics (AVLOG), establishes doctrine for planning and executing Marine aviation logistics.

Support Equipment (SE)

SE prepositioned within the MPF is primarily composed of larger assets meeting specific height and weight criteria (e.g. aircraft tow tractors, heavy maintenance cranes, etc.), Armament Weapons Support Equipment (AWSE), and SE for limited intermediate level maintenance. The SE within the Marine Corps Prepositioning Program, when combined with SE transported into theater via the FIE, comprise all the SE required to support each Type, Model, Series (T/M/S) aircraft during the first 30 days of combat operations. The flight ferry includes the SE required for initial aircraft operations, such as debarkation, recovery, staging, reassembly, and servicing.

Expeditionary Air Field (EAF)

Airfield surfacing, arresting gear, airfield lighting, and all associated equipment for one EAF are resident within each active duty MAW. MPSRONs 2 and 3 have the required airfield surfacing (AM-2), arresting gear (M-31), and terminal guidance (Fresnel Lens) to construct an EAF; however, it should be noted that the MPSRON does not have all the additional EAF support packages required to install the modular and expanded capability of an EAF-2000. The EAF packages spread-loaded across 3 ships within each MPSRON's ships (and at the respective MAWs) can be used to construct an airfield where none exists or improve an existing airfield that does not possess the required capabilities. The components of the EAF: airfield surfacing, aircraft arrestment, airfield lighting, and visual landing aids (terminal guidance) can be used independently or as an encompassing system. Airfields can be tailored to meet the specific needs of the aircraft and mission.

Aviation Ground Support Equipment (AGSE)
AGSE is prepositioned on MPF for the MAW/MWSS and is designed and employed specifically for support of the ACE. These assets include the P-19 aircraft rescue firefighting vehicle, the Fire Suppression System (FSS), proximity firefighting ensembles (silver gear), MK-970 aircraft refueling vehicle, Helicopter Expeditionary Refueling Systems (HERS), and Tactical Aircraft Fuel Dispensing Systems (TAFDS). AGSE equipment aboard MPF, along with associated FIE requirements, provide an all-weather scalable capability that safely provides Aircraft Rescue Fire Fighting (ARFF) and fuel services to the ACE.

Marine Wing Support Squadron (MWSS) Equipment
All other equipment supporting ACE operations such as tents, trucks, forklifts, vehicles, radios, etc., are prepositioned aboard the MPSRONs for initial issue and distributed to the MWSS upon offload.

Aviation Logistics Support Ship (T-AVB)
The Aviation Logistics Support ships, T-AVBs SS WRIGHT and SS CURTISS, are not MPF assets but are in direct support of the MAGTF. These ships currently provide dedicated sealift for employment of a tailored Marine Aviation Logistics Squadron (MALS) in support of a MAGTF ACE for both fixed and rotary wing aircraft. Each ship is capable of berthing 325 Marines. For more detailed information about T-AVB characteristics and AVLOG planning considerations refer to MCWP 3-21.2 Aviation Logistics.

Naval Construction Element (NCE)
The NCE and is primarily composed of the Naval Mobile Construction Battalion (NMCB) and Naval Construction Regiment (NCR), known as "Seabees," and provides deliberate engineering support, to include major construction, facilities repair, and other general support.

The NCE is a self-sufficient organization of approximately 700 Sailors. It has its own support structure, including medical, communication, food service/messing, supply, and maintenance capabilities. Additionally, a Seabee Battalion provides for its own security, including basic ground defense with crew served weapons, security patrolling, etc.

The NCE provides the MPF MEB with a wide range of construction capabilities. One company of the battalion provides "horizontal" construction; such as roads, airfields, and site preparation. Another company specializes in "vertical" construction of buildings and other structures. A third company, the utilities company, accomplishes electrical, plumbing and other utility work. The Battalion Headquarters Company provides all the internal support functions for the unit.

Examples of the diverse missions that can be accomplished by the Seabee Battalion include support of the EAF, construction and maintenance of troop billeting, roads, standard and non-standard bridging, fuel storage and ammunition supply points, water wells, and bulk storage facilities.

Expeditionary Medical Facility (EMF)

An EMF is loaded aboard one MPS of each MPSRON providing a 150 bed facility. Once off-loaded, the EMF provides comprehensive medical support for a theater facility capable of level III treatment and hospitalization. Figure 4 provides a list of Expeditionary Medical Facility's Level III Capabilities.

The EMF is available to support Marine Corps missions as directed by the Combatant Commander or Naval Component Commander. Medical personnel who assemble and operate the EMF are deployed from various Navy medical commands and flown into theater during a contingency.

Figure 4 | Expeditionary Medical Facility Level III Capability

Mission	Provide full resuscitation and emergency stabilization surgery of wounded/ill patients with the goal of maximizing return to duty for those not requiring medical evacuation rearward.
Capacity	150 Beds 40 Intensive Beds 110 Intermediate beds
Surgical Capacity	4 Operating Room Tables (55 admissions/36 operative procedures daily) Surgical specialties General, Thoracic Urology, Gynecology Orthopedics, Neurosurgery Ophthalmology, Anesthesiology Oral surgery, General dentistry Includes Triage Limited blood bank (less frozen)
Supplies	Deploys with 30 days of consumables, less dated and deteriorative items 30 day blocks
Site Footprint	13.45 Acres (54,035 m2)
Built-up Time Required	Begins to receive casualties in 48 to 72 hours. Fully assembled in 5 days. Self-contained for daily operations Requires external support for displacement Requires links to external supply sources
Organic Base Support	Staff and Patient Admin Food Service Blood Management Laundry General and Medical Supplies

MPF Fly-in Echelon (FIE) and Flight Ferry (FF)

An MPF operation employs more than just the MPS. Employing an MPF requires the strategic airlift of MAGTF personnel and a significant amount of unit organic equipment in what is known as the FIE. The FIE deploys to the AAA to assemble with the equipment and supplies offloaded from the MPS. The flight ferry is a subset of the FIE and includes the ACE's self-deploying aircraft and aerial refueling support. The equipment assigned to the FIE generally includes equipment and supplies unable to fit on MPS, critical low-density assets, high-value equipment, and supplies that were not prepositioned due to shelf life or calibration limitations. Deploying units also include in the FIE non-prepositioned equipment necessary to bring the unit to its full table of equipment (T/E) combat capability due to insufficient capacity aboard MPS. Sequencing the FIE should give the planner flexibility to deploy critical supplies or equipment to the area of operations, but must be accomplished by detailed coordination with external agencies via force deployment planning and execution systems when using the same arrival airfield. Appendix D provides the strategic airlift sortie planning considerations required to support the movement of the FIE based on the current notional MPF MEB force structure.

Navy Support Element (NSE)

The NSE is key to the execution of MPF operations. The NSE is comprised of units from the Naval Beach Group, Amphibious Construction Battalion, Assault Craft Unit, Beachmaster Unit, and the Navy Cargo Handling Battalion.

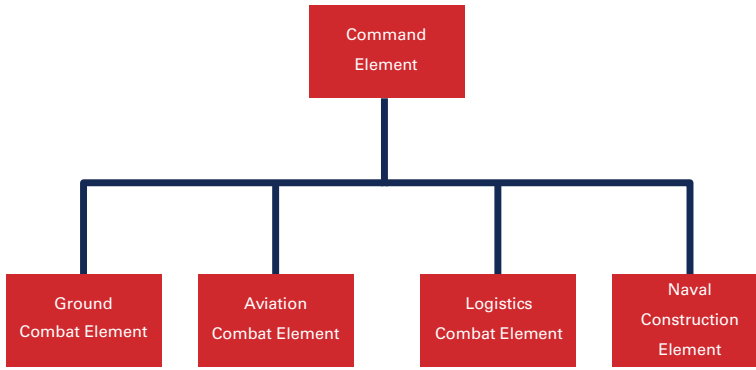
NSE units are self-sustaining and deploy as part of the FIE with 200 to 850 personnel, depending on the scope of the mission. They provide command and control, offload control unit personnel, lighterage crews, MPF utility boat crews, stevedores, transportation, maintenance elements, medical, life support and defense combat capabilities for the operation. Examples of NSE capabilities include INLS employment, Amphibious Bulk Liquid Transfer Systems (ABLTS) operations, and Beach Party Group Operations. Additional information about the NSE can be found in Appendix B.

LOGISTICS PLANNING CONSIDERATIONS

Notional Marine Expeditionary Brigade (MEB)

The notional MPF MEB is comprised of approximately 16,000 Marines and Sailors, and is sourced from its parent MEF. The organization of the MPF MEB follows traditional MAGTF relationships, depicted in Figure 5, below.

Figure 5 | Notional MPF MEB Organizational Structure



The MPF MEB Ground Combat Element (GCE) includes significant combat power consisting of tanks, artillery, assault amphibian vehicles, and light armored reconnaissance vehicles. A list of selected principal end items and supplies may be found in Table I. The notional MPF MEB also contains a robust Aviation Combat Element (ACE), Logistics Combat Element (LCE) and a Naval Construction Element (NCE) as displayed in Figure 6.

Figure 6 | Notional MPF MEB Element Composition

Components	*Description*
Command Element (CE)	Provided by the MEF headquarters. The deputy MEF commander is typically designated as the MEB commander.
Ground Combat Element (GCE)	Regimental Combat Team (RCT) composed of a regimental headquarters, three infantry battalions, an artillery battalion of five firing batteries, a tank battalion, two combat engineer companies, two amphibious assault companies, a light armored vehicle company, and reconnaissance units.
Aviation Combat Element (ACE)	Composite Marine Aircraft Group (MAG) consisting of Fixed Wing (F/W), Rotary Wing (R/W), and supporting units to provide all or part of the six functions of Marine Corps aviation based on the size and mission of the MAGTF.
Logistics Combat Element (LCE)	Combat Logistics Regiment (CLR), composed of task-organized Combat Logistics Battalion (CLB), reinforced with functional supply, maintenance, transportation, engineering, and health services, to provide the full range of tactical logistics functions necessary to accomplish the mission.
Naval Construction Element (NCE)	Naval Construction Regiment (NCR) Detachment and Naval Mobile Construction Battalion (NMCB) provide deliberate engineering support to the MAGTF, to include major horizontal and vertical construction, facilities repair, and other general engineering support. The NCE increases the strength and capability of the organization beyond a typical MEB.

The notional MPF MEB Force List is crucial to the Tailoring process whereby force composition, supplies, equipment, storage, and employment are all taken into consideration in order to sustain an MPF MAGTF. During the Tailoring process, the MCBul 3501 Force List (output during Tailoring process) is updated and included as an enclosure/reference in the NAVMC 2907 Prepositioning Objective (output from the Tailoring process). Since that Tailoring cycle is continuous, depending on the maturity of the current cycle, the most up-to-date Force List will be found in the NAVMC 2907.

Ship Characteristics

Whether pier-side or in-stream, MPS have unique capabilities to deliver outsized rolling stock, tracked assets, ammunition, supplies, bulk fuel and water. The MPF program currently has 14 prepositioning ships that include six T-AKs, four T-AKRs, and two T-AKEs. Two ESDs are the latest additions to the MPF Program (2015). The MLPs will provide combatant commanders the ability to offload rolling-stock from the side-port ramp of a T-AKR at distances of 12 - 25 nautical miles from shore. Other surface connectors, such as the Landing Craft Air Cushion (LCAC) or Expeditionary Fast Transport (EFT), able to conduct vehicle or cargo transfer from the ESD to the shore.

Figure 7 provides the ship types and classes assigned to the MPF Program, their specific characteristics, and other key logistics planning considerations. This data may differ slightly from the official data in the Ship's Loading Characteristics Pamphlets (SLCPs) due to configuration adjustments made since the latest SLCP publication date. SLCPs are updated by Maritime Sealift Command (MSC) and sent to BIC for uploading to Marine Corps Prepositioning Information Center (MCPIC).

Figure 7 | MPS Select Ships' Characteristics

MPF Ships/ Capabilities	BOBO Class	Modified SHUGHART Class	LEWIS & CLARK Class
Type Number	T-AK 3008/09/10/11/12	T-AK 3017	T-AKE 1, 2
			
	Length Overall: 673 ft Beam: 105 ft 6 in Displ: 40,846 ltons	Length Overall: 849 ft Beam: 105 ft 7 in Displ: 59,468 ltons	Length Overall: 689 ft Beam: 105 ft 7 in Displ: 42,416 ltons
Ship Names	USNS's BOBO, BUTTON, LOPEZ, LUMMUS, WILLIAMS	USNS STOCKHAM	USNS LEWIS & CLARK USNS SACAGAWEA
Speed (Ec/Max)	12/17.7 kts	18/24 kts	14/20 kts
Bbl Per Day	340	100 DFM/500 IFO	400
Draft	32 ft	36 ft	29.8 ft
Medical	Sick-Call	Sick-Call	Sick-Call
Potable Water	98,990 gal; 36K/day*	160,320 gal; 19K/day	53,000 gal; 30K/day*
Flight Deck	1 Spot (LVL II, CL 3) 3012 – MV-22: Lvl II, CL4	1 Spot, H53 (LVL II, CL 2/4)	1 Spot, H53 (LVL I, CL 1) MV-22: Lvl I, CL 2/4
Aircraft Parking (Hangar, etc.)	N/A	2 MH-60s Hangar	2 MH-60S, Hangar: 2,486 ft2, Crane 4K
Elevators (Cargo)	N/A	N/A	(4) 8 ST (4) 6 ST
Ramp (Capacities are pier side, and are reduced if operating with RRDF)	Stern (Semi-Slewing) 110'Lx24'W 67.98 ST	Stern (Slewing) 138'11"L x 24'W 79.52 ST Side-port capable	N/A
Square Feet (Gross) (unless occupied by TEUs)	154,000 ft2	258,006 ft2	N/A
Cargo Cube (TEU)	560 TEU	545 TEU	953,700 ft3
Lift On/Lift Off Crane	(5) Cranes: 46.68 ST ea; Twin 87.36 ST; Triple 131.04 ST	1) Twin 126.56 ST Aft (1) Single 63.84 ST Fwd	(4) Cranes 11 ST
Cargo Fuel (JP-5)	1,250,000 gal	40,000 gal	1,160,000 gal

** Planners should consider production quantities include water for ships' systems and crews*

Figure 7 | MPS Select Ships' Characteristics

MPF Ships/ Capabilities	BOB HOPE Class	WATSON Class	Monford Point Class
Type Number	T-AKR 304, 302	T-AKR 311, 312	ESD 1,2
			
	Length Overall: 884 ft Beam: 105ft 10 in Displ: 62,833 lton	Length Overall: 905 ft Beam: 105 ft 9 in Displ: 61,790 ltons	Length Overall: 785 ft Beam: 164 ft in Displ: 98,320 ltons
Ship Names	USNS PILILAAU USNS SEAY	USNS SISLER USNS DAHL	USNS MONTFORD POINT USNS JOHN GLENN
Speed (Ec/Max)	18/24 kts	16/24 kts	13/17 kts
Bbl Per Day	425	775	475
Draft	35 ft	33.6 ft	39 ft
Medical	Sick-Call	Sick-Call	N/A
Potable Water	55,014 gal; 20.5K/day	70,646 gal; 16.5K/day	100,000 gal; 25K/day
Flight Deck	1 Spot H53 (LVL 2,CL 3/4) 302 – MV-22: Lvl II, CL 4	1 Spot H53 (LVL 3, CL 3/4) MV-22: Lvl II, CL 4	1 Spot (USCG) – MOD Emergency Only
Aircraft Parking (Hangar, etc.)	N/A	N/A	N/A
Elevators (Cargo)	N/A	N/A	N/A
Ramp (Capacities are pier side, and are reduced if operating with RRDF)	Stern 79.52 ST (Slewing: L135'xW24')	Stern 79.52 ST (Slewing: L135'xW24')	1 Vehicle Transfer Ramp (VTR) (T-AKR side-port ramp, 79.52 ST)
Square Feet (Gross) (unless occupied by TEUs)	315,000 ft2	353,000 ft2	25,000 ft2
Cargo Cube (TEU)	598 TEU	586 TEU	20 TEU
Lift On/Lift Off Cranes	(2) Sets (Single 63 ST ea) (Twin – 126.56 ST)	(2) Sets - Sideport, Stern (Single 63 ST ea) (Twin – 126.56 ST)	(1) 10 LT, (2) 5 LT
Cargo Fuel (JP-5)	N/A	N/A	380,000 gal

** Planners should consider production quantities include water for ships' systems and crews*

In summary, the types and classes of MPS provide a responsive, flexible and scalable capability to the MPF Program. Some of the unique features that these ships bring to the MPSRONs include the T-AK which are capable of storing and transferring to shore bulk liquids, and the T-AKE which provides break-bulk stowage and selective offload option due to its unitized and palletized cargo. The T-AKR is designed to transport and offload heavier, out-sized rolling stock and equipment. The T-AKR and ESD work in tandem to provide skin-to-skin vehicle transfer from the T-AKR to the ESD via the T-AKR's side-port. The USNS STOCKHAM, LEWIS & CLARK, and SACAGAWEA possess an aircraft refueling capability.

Figure 8 provides by-MPSRON roll-ups of selected key logistics planning considerations.

Figure 8 | MPS Select Squadron Characteristics

Squadron			*MPSRON - 2*	*MPSRON - 3*
Capacity	**SqFt**	**Max**	1,036K Sqft	989K Sqft
		Min	876K Sqft	885K Sqft
	TEU	**Max**	3,332	3,075
		Min	2,409	2,241
JP-5 Storage			4.29M Gal	5.72M Gal
Water Storage			450K Gal	447K Gal
Water Production*			116K Gal/Day	128K Gal/Day
Range			10-12K Nm	10-12K Nm

** Planners should consider production quantities include water for ships' systems and crews*

MPS Berthing

A clearly defined allocation of staterooms and surge berthing greatly assists in deployment planning and ensures necessary personnel are adequately billeted aboard MPS to support MPF operations.

Billeting assignments for the Navy and Marine Corps forces during transit, pier-side and/or in-stream offloads will be coordinated between the OPP officer in charge (OIC) and the MAGTF Offload Liaison Officer (MOLO). To assist in this logistics planning process, Figure 9 reflects all available Crew, Marine Corps Maintenance Contractor (MCMC), OPP and surge berthing spaces available.

Figure 9 | MPF Ship Berthing Capacities

Ship	Crew / MCMC Berthing	OPP / Surge
MPSRON-2		
BUTTON	44	136*
LOPEZ	44	136*
SISLER	45	127
SEAY	45	126
STOCKHAM	42	130
LEWIS AND CLARK	64	134
MONTFORD POINT	34	12**
Total MPSRON-2	**318**	**801**
MPSRON-3		
LUMMUS	44	136*
BOBO	44	136*
WILLIAMS	44	136*
PILILAAU	45	126
DAHL	45	127
SACAGAWEA	64	134
JOHN GLENN	34	12**
Total MPSRON-3	**320**	**807**
MPF Totals	**638**	**1608**

**Includes 17 MPSRON staff spaces*
***Embark Security Team only*

MPS Ship-to-Shore Offload Organic Capabilities

Each MPSRON has the ability to independently offload its rolling stock and containers in-stream without the use of a port facility. Each MPSRON deploys with a 240 X 72 foot roll-on/roll-off discharge facility (RRDF) that provides a docking and ramp module to transfer primarily rolling stock ashore by connecting with either causeway ferry assemblies or other surface connectors. Rolling stock and twenty foot equivalent unit (TEU) containers are transferred ashore via the Causeway Ferry (CF). For planning purposes, the standard configuration is comprised of a 2+1 combination which includes one beach module, one intermediate module and one power module. This configuration can move the equivalent of 7 MTVRs or 14 TEUs per trip to the beach. Navy watercraft are used to move, guide, and stabilize various surface connectors during loading and beach off-load operations. Another ship-to-shore capability resident on selected MPS is the Amphibious Bulk Liquids Transfer System (ABLTS) which is comprised of 10,000 feet of 6 inch buoyant fuel hose and 10,000 feet of 4 inch buoyant water hose. The BOBO Class T-AK can pump fuel and water from up to 10,000 feet offshore from the landward discharge point. Figure 10 does not reflect capacity, but rather indicates how these capabilities are being spread-loaded across the MPSRONs based on planned configurations at the completion of MMC-11.

Figure 10 | Improved Navy Lighterage System, Watercraft, and ABLTS (Planned MMC-12 Configurations)

Ship	Warping Tug (SLWT)	2+1 Cause Way Ferry*	RRDF	Utility Boat	LCM-8	LARC-V	ABLTS
			MPSRON-2				
SEAY	1	3		2		2	
BUTTON	1	3		2	1	2	1
SISLER	1	2		1			
LOPEZ	1	3		1	1		1
STOCKHAM	1		1	1			
LEWIS AND CLARK							
MONTFORD POINT							
MPSRON Total	5	11	1	7	2	4	2
			MPSRON-3				
PILILAAU	1	3		2		2	
BOBO	1	3		3		2	1
DAHL	1	2		1			
LUMMUS	1	3		1	1		1
WILLIAMS	1		1	1			1
SACAGAWEA							
JOHN GLENN							
MPSRON Total	5	11	1	8	1	4	3
MPF Total	10	22	2	15	3	8	5

**Standard 2 + 1 configuration. Other configurations include 1 + 1 (1 power module and 1 beach module), and 3 + 1(1 power module, 2 intermediate modules, and 1 beach module)*

Although not normally considered a ship-to-shore capability, Rigid Hull Inflatable Boats (RHIB) are also available for transfer of personnel. There are two 7 meter RHIBs on each T-AKE and each is capable of carrying 15 personnel, which includes a two person crew.

MPS Interoperability Considerations

MPS have been realigned into two MPSRONs. New capabilities have been introduced including completing the integration of T-AKR vessels and the introduction of the ESD and the T-AKE ships. These new platforms and concepts demand a greater degree of interoperability between ships, connectors and aircraft in order to provide the employment, selective offload of tailorable sustainment packages, and at-sea transfer of personnel and equipment. Table II provides three charts that depict the interoperability of MPS ship-to-ship, with surface connectors, and with aviation assets.

MARINE CORPS PREPOSITIONING PROGRAM–NORWAY (MCPP-N)

OVERVIEW

MCPP-N is a HQMC managed prepositioning program and is maintained in Norway in accordance with an MOU between the Government of the United States of America and the Government of the Kingdom of Norway for the storage, maintenance, and prepositioning of equipment and supplies for a MAGTF. Operating costs are shared between the Marine Corps and the Government of Norway. Maintenance for the majority of MCPP-N equipment is conducted by Norwegian government civilians, supervized by Norwegian military personnel, with oversight provided by Marine Corps Logistics Command's (MARCORLOGCOM) Blount Island Command (BIC). Some items are maintained by US personnel due to security restrictions[4].

MCPP-N HISTORY

The Governments of the United States and Norway signed an MOU in 1981 that initiated the Norway Air-Landed Marine Expeditionary Brigade (NALMEB) Program. In 1982, a Basic Support Agreement between the Minister of Defense (MOD), Norway and the Commander-in-Chief, U.S. European Command, and a Storage Agreement between the Chief of Defense, Norway and the Commander-in-Chief, U.S. European Command solidified arrangements for the NALMEB program. Between 1985 and 1989, 673K square feet of storage facilities were built using NATO infrastructure funds. NALMEB achieved initial operational capability in January 1990.

In 2004, the Commandant of the Marine Corps directed a NALMEB bottom-up review and re-designated the program as MCPP-N to signify its change in focus as a global response capability. During April to June 2011, Headquarters U.S. Marine Corps convened a deliberate planning effort to develop options to strengthen the effectiveness of MCPP-N in a fiscally constrained environment. This resulted in recommendations to more closely align the prepositioned equipment set to strategic and operational requirements, while enhancing USMC prepositioning to better enable expeditionary operations. In January 2012, the Commandant of the Marine Corps codified the results of this planning effort by publishing his planning guidance for MCPP-N. This guidance directed the transformation of MCPP-N to an equipment set, with associated capability sets, that supports a balanced MAGTF.

[4] MCO 3000.17

MCPP-N OPERATIONS

Based on the 2005 MOU, titled Memorandum of Understanding Governing the Pre-stockage and Reinforcement of Norway, signed by the U.S. Secretary of Defense and the Norwegian MOD, the Government of Norway provides the logistics infrastructure to support the storage, maintenance, withdrawal, movement, and recovery of prepositioned equipment and supplies. This support includes airbase facilities, transportation assets (both land and sea), security personnel, and the maintenance of prepositioned equipment. HQMC provides program guidance and oversight for MCPP-N and manages the program through the bilateral organizations as set forth in the Terms of Reference (TOR). The TOR is an agreement between the U.S. Marine Corps and Defense Staff Norway (DEFSTNOR) and sets forth the structure, functions, and responsibilities of specific agencies and organizations in support of MCPP-N.

APPLICATION OF MCPP-N ACROSS THE ROMO

MCPP-N stores equipment and supplies that support the stand-up of one or more MAGTFs conducting low to mid-intensity conflicts. The primary focus is to support a MAGTF built around a command element, an infantry battalion task force, a composite aviation squadron, and a logistics element. Support for simultaneous missions include theater security cooperation events and additional capabilities formed into adaptive force equipment sets designated for cold weather, route reconnaissance and clearance, security, bridging, and other equipment capabilities not organic to the MCPP-N MAGTF notional T/E. When augmented by the FIE, MCPP-N retains the ability to execute any of these employment options. The closure of a MEB requires amphibious or MPF augmentation in addition to the FIE.

Figure 11 | Application of MCPP-N Across the ROMO

Components of MCPP-N	*Description*
MCPP-N MAGTF	This primary equipment set supports a shore-based, balanced MAGTF that is built around an infantry battalion, composite squadron and logistics element enabled for crisis response.
3x Theater Security Cooperation (TSC) Special Purpose (SP) MAGTFs	Three company (REIN)-sized Special Purpose MAGTFs (SPMAGTF) engagements.
Adaptive Force Equipment Sets	Capabilities that are not part of the MCPP-N MAGTF organic tables of equipment (T/E) are identified and prepositioned.
MEB Augmentation	Additional equipment and supplies as deemed necessary and remains within a MEB's requirement can be prepositioned.

Figure 11 depicts the components of MCPP-N. In order to support these components, the MCPP-N equipment set was developed based off the requirement to support simultaneous operations with the ability to provide additional capabilities through the use of Adaptive Force Equipment Sets. These equipment sets include:

- **Habitability:** To support quality of life for the force
- **Chemical, Biological, Radiological, and Nuclear (CBRN):** To provide consequence management, and survivability of the force
- **Arrival and Assembly:** To support the reception, staging, onward movement and integration of the MAGTF and follow-on MPF
- **Water production:** To provide sustainable water production for additional forces
- **Bridging:** To provide mobility and bridging capability to the force
- **Fuel:** To provide bulk storage and refueling capability
- **Electrical:** To provide electrical distribution to the force
- **Mountain/cold weather (M/CW):** To provide survivability for the MAGTF supporting the reinforcement of Norway.
- **Security:** Enhanced force protection to provide infrastructure, survivability and base hardening
- **Route reconnaissance and clearance (R2C):** To provide mobility and survivability of the force

MCPP-N LOGISTICS PLANNING FACTORS

The equipment and supplies that support MCPP-N are stored and maintained in six caves and two storage facilities co-located with Air Stations in the Troendelag region of central Norway. Their locations are depicted in Figure 12 and characteristics of these facilities are provided in Figure 13.

Figure 12 | MCPP-N Storage Locations

Figure 13 | MCPP-N Storage Site Characteristics

Harsh climate prevents outdoor storage/maintenance. In-rock (caves) for all Ground Equipment and Supplies. Dehumidified storage buildings for Aviation Support Equipment (ASE).

Ground Equipment		*Gross SqFt*	*Net SqFt*
Frigaard	Equipment/supplies	247,435	192,577
Tromsdal	Equipment/supplies	286,016	218,281
Bjugn	Equipment/supplies	140,458	118,941
Aviation Support Equipment			
Vaernes Garrison	R/W reception site	104,871	57,079
Oerland Main Airstation	F/W reception site	22,076	19,768
Munitions			
Hammernesodden	Ground	36,693	19,142
Hammerkammen	Ground	37,338	20,164
Kalvaa	Air/Ground	55,308	27,169
Ground Totals		673,909	529,799
Aviation Totals		126,947	76,847
Munitions Totals		129,339	66,475
Grand Total		930,195	673,121

Due to topological and weather conditions in Norway, special consideration must be taken when operating and maintaining equipment. Examples of these considerations include the use of tire chains which are required in Norway during certain months of the year. Also to be taken into logistics planning considerations are the unique petroleum, oils and lubricants (POL) that are required when operating in severe cold weather. Details about which oils and fuel additives are required can be found in the individual equipment technical manuals.

In order to effectively and efficiently plan and coordinate transportation and distribution of MCPP-N supplies and equipment during a withdrawal exercise, operation or contingency, Figure 14 is provided and reflects the distances in miles and kilometers between key cave locations, rail heads and ports. Transportation planning should also take into consideration Norwegian roads and highway routes that pass through small towns and villages, and routes that are channelized due to tunnels and constricting terrain features.

Figure 14 | MCPP-N Transportation Considerations

Distances in Kilometers/ Miles	Oerland	Bjugn	Kalvaa	Frigaard	Vaernes	Hammer-kammen	Tromsdal	Hammer-nesodden
Airfields:								
Vaernes	131/81	119/74	123/76	13/8	0	21/13	77/48	143/89
Oerland	0	14/9	10/6	133/82	131/81	144/89	162/100	167/104
Railheads:								
Trondheim	100/62	84/52	88/55	38/24	36/22	49/30	106/66	171/106
Ports:								
Hommelvik	122/76	109/68	114/71	15/10	14/9	27/17	84/52	150/93
Trondheim	100/62	84/52	88/55	38/24	36/22	49/30	106/66	171/106
Orkanger	57/35	68/42	64/40	76/47	74/46	87/54	144/89	209/130
Uthaug	5/3	14/9	12/7	137/82	135/84	149/92	162/100	167/104
Paper Mill	161/100	148/92	152/94	47/29	41/25	30/19	37/23	102/63
Verdal	143/89	129/80	133/82	66/41	61/38	50/31	21/13	84/52
Hammer-nesodden	167/104	154/95	158/98	148/92	143/89	131/81	104/64	0

HOST NATION SUPPORT

For employment in Norway, to include exercises, robust host nation support is provided by the Norwegian military to the MAGTF. Coordination for military and contracted support and services is conducted through the Norwegian National Logistics Command (NLC). Home Guard units throughout Norway provide force protection and other local support, with Home Guard 12 supporting forces falling in on MCPP-N in the Troendelag region of central Norway. Upon standup and employment of forces in Norway, the Host Nation Support Battalion (HNSBN) provides a significant service support capability and is attached to Marine Corps forces. The HNSBN mission is to provide limited logistic and engineer support to a MEB or elements of the MEB after arrival in Norway. The MEB commander will nomally receive operational control (TACOM or TACON) of designated capabilties of the HNSBN once the MEB is declared operational in the Key Employment Area (KEA) within Norway. Normally, the HNSBN will be attached to the Logistics Combat Element (LCE) of the supported Marine Corps formation.

CHAPTER 2
PREPOSITIONING LOGISTICS PROGRAM MANAGEMENT

TAILORING

Overview

DC, I&L will lead, coordinate, and integrate all Marine Corps and Navy tailoring efforts. These tailoring efforts are part of a larger Tailoring Cycle that frames the deliberate and coordinated planning process to review and validate that the equipment and supplies prepositioned for MPF and MCPP-N are relevant capabilities that support operational concepts and are supportable within the Service program objective memorandum (POM).

Tailoring Cycle

There are three basic stages to the Tailoring Cycle: Guidance, Tailoring, and Execution. Operational and logistical guidance is promulgated by HQMC (PP&O and I&L). HQMC I&L will provide Tailoring guidance that is shaped by operational guidance and a myriad of logistics planning factors influenced by current and future enterprise strategies, operational demands, workforce/facility capacity, budgets, and program demands to meet maintenance and operational timelines.

Tailoring guidance will establish a plan of action and milestones (POA&M) and identify Operational Planning Team (OPT) and Tailoring Working Group (TWG) timelines, schedules, objectives and requirements. Tailoring is then conducted over a period of 12-18 months to support an upcoming MPF Maintenance Cycle (MMC), implement new operational concepts or war fighting requirements, and/or account for the fielding of new weapons systems and replacement of legacy equipment. Tailoring will be orchestrated by HQMC I&L (LPO-2) to bring program stakeholders together during multiple events, conducted over an extended period of time, to determine the future capabilities, equipment sets, and supplies for the prepositioning programs. Execution, conducted by MARCORLOGCOM (BIC), includes all actions required to implement the PO published in the NAVMC 2907. The end state of the Tailoring Cycle is an optimized and integrated Navy and Marine Corps prepositioning capability that enables the operating forces (OPFOR) to execute their concepts of operations in support of crisis response and major combat operations.

Stakeholder Engagements

Numerous engagements occur throughout the Tailoring Cycle to ensure that all stakeholders are given the opportunity to integrate their requirements into the Tailoring planning process. Tailoring OPTs and working groups review all aspects of the MPF and MCPP-N programs to optimize the future PO. Additionally, stakeholders can engage in shaping the MPF program through participation in the MPF Program Oversight Working Group (POWG) which addresses Navy and Marine Corps integration issues, or the semi-annual MCPP-N bilateral Program Management Group (PMG) which reviews prepositioned equipment and operational and deployment considerations with our Norwegian strategic partners.

PREPOSITIONING PROGRAM LOGISTICS REFERENCE TOOLS

Overview

The Tailoring process requires the synchronization of inputs that include logistics reference data; authoritative data sources regarding force structure, acquisition cycles, equipment technical data, and ship characteristics; the MPF maintenance cycle; and information from the programming and budgeting process. In addition to collating and organizing this information in a way that supports responsive decision making, the process also demands interaction with prepositioning programs stakeholders from Marine Corps and Navy service level headquarters, the supporting establishment and the operating forces. The dynamic nature of multi-variable, multi-participant decision making demands effective tools that are automated, user-friendly and populated with accurate information that is recognized as authoritative by the entire enterprise conducting the decision making.

Accordingly, HQMC I&L Logistics Plans and Operations (LPO) has coordinated the development of several prepositioning logistics reference tools. These tools include the Marine Corps Prepositioning Information Center (MCPIC), the MPF MEB Force Structure Playbook, and the Prepositioning Equipment Playbook. MCPIC, specifically the Prepositioning Decision Support and Analysis Tool (PDSAT), provides planners with analysis for current and future program decisions associated with optimizing the type and quantity of materiel prepositioned in MPF and MCPP-N. The MPF MEB Force Structure Playbook provides both equipment and personnel information for the operating force planner and tailoring process stakeholders, while the Prepositioning Equipment Playbook is a decision support tool designed for all MPF and MCPP-N stakeholders and senior leaders.

Marine Corps Prepositioning Information Center (MCPIC)

MARCORLOGCOM (BIC), in coordination with HQMC I&L (LPO-2), maintains several enabling systems that facilitate management and provide visibility of on-hand equipment and supplies for MPF and MCPP-N. MCPIC is a web-based application developed to provide a central location for information and data for MPF and MCPP-N programs. MCPIC includes four features used by prepositioning planners:

- **Prepositioning Decision Support and Analysis Tool (PDSAT):** PDSAT provides planners with analysis for current and future program decisions associated with optimizing the type and quantity of materiel prepositioned in MPF and MCPP-N. PDSAT has the ability to receive specific reports from TFSMS in order to manage unit assignments to the MEB T/E, support user review and input, conduct force composition analysis, and interface with MCPIC for equipment configuration data to assess unit distribution and ship association.
- **Prepositioning Planning System (PPS):** PPS features plans for MPF and MCPP-N (with breakdowns available for MPSRON, individual ship, and ashore sites); associated reference data; POs; Component Stock List (SL-3) identified Table of Authorized Control Numbers (TAMCNs); and parent/child association requirements.
- **Prepositioned Equipment and Supplies Viewer (PES-V):** PES-V provides users with the ability to query data for equipment and supplies deployed on MPS, as well as MCPP-N data by cave location.
- **Knowledge Management Explorer (KME):** KME, a simplified version of Microsoft Office SharePoint, is the central repository for MCPIC document control and prepositioning documents.

MCPIC is currently going through a transition to MCPIC 2.0 that will provide these capabilities in a more integrated manner. Appendix E provides selected screen shots from PDSAT and information on the transition to MCPIC 2.0.

MPF MEB Force Structure Playbook

The MPF MEB Force Structure Playbook was developed by HQMC (LPO-2) to more easily display equipment and personnel requirements at the MEB and Major Subordinate Element (MSE) levels with the ability to navigate and drill-down into company and detachment level details. This playbook is hosted on the LPO-2 SharePoint site (https://eis.usmc.mil/site/hqmclp/lpo).

The MPF MEB Force Structure Playbook is a one-stop shop data source for displaying a visual architecture, Military Occupational Specialty (MOS), and TAMCN level details at the company and detachment level to facilitate MARFOR validation. This tool provides data fidelity to enable more effective and efficient synchronization of personnel skill sets with equipment requirements (and vice versa) to create MAGTF and unit capabilities. This information is displayed in four interactive sections within the Playbook:

- **Information Section:** Contains purpose, instructions, POCs, and other update sections.
- **MEB Transition Section:** Allows the user to view past, current, and future Force List diagrams by fiscal year.
- **MEB Force List Section:** Contains an interactive display of the MEB broken out by MSE.
- **Reports Section:** Allows users to view indicator thresholds throughout the tool and allows them to print specific unit summaries.

In addition to assisting the MARFORs with assessing capabilities and honing in on areas that may require resource validations and/or trade-offs, the MPF MEB Force Structure Playbook provides detailed analysis and discrepancy reports based on pre-defined planning factors. Analysis report examples include: comparing equipment density to numbers of drivers, operators and mechanics in the force structure; identifying equipment parent/child relationships (e.g., prime movers to trailers); and validating MAGTF capabilities. Authoritative systems such as TFSMS, PDSAT and MCPIC are leveraged to provide data accuracy and consistency.

Appendix F provides the introductory screen shot from the MPF Force Structure Playbook.

Prepositioning Equipment Playbook

The Prepositioning Equipment Playbook was developed by HQMC I&L (LPO-2) as a decision support tool for prepositioning program stakeholders and the primary means for identifying and reconciling equipment requirements registered as PO and/or approved acquisition objective (AAO). The playbook reconciles data from several sources into an easy-to-use and dynamic database. The data links to information sources from MCPIC/PDSAT, TFSMS, Item Applications File (Item Apps), and Total Lifecycle Management-Enterprise Asset Posture Tool (TLCM-OST). By identifying inconsistencies between systems of record and authoritative data sources, the playbook provides an effective method for PO validation and refinement during the Tailoring process. The Playbook displays valuable equipment data, portrayed in several summary view sections:

- **TAMCN Breakdown Section:** Provides detailed information on every TAMCN in the prepositioning programs. Important issues related to EFIS, MPF and MCPP-N are also tracked.
- **Summary View Section:** Provides attainment ratings for commodity programs, an equipment discrepancy summary and program costs.
- **Program View Section:** Provides data similar to the Summary View, but

gives a greater focus to individual prepositioning programs.

- TAMCN View Section: Provides descriptions, pictures, strategic distribution and focused prepositioning data on each Principle End Item (PEI). This section has the capability to apply user-specified criteria to filter the equipment population in order to perform specific analyses.
- Tailoring Issues Section: Provides ability to track issues related to different categories such as associations, affordability, prepositioning criteria, fielding, and configuration requirements.

To ensure the Playbook remains a relevant decision support tool, it is accessible on the LPO SharePoint site (https://eis.usmc.mil/site/hqmclp/lpo), and is viewable in any internet browser window. Other capabilities being added include: streamlining PO validation processes used by Tailoring Working Groups, and integrating ship schedules, attainment levels, and MMC data in order to mitigate equipment shortfalls.

Appendix G provides the introductory screen shot from the Prepositioning Equipment Playbook.

CHAPTER 3
MARINE CORPS LOGISTICS COMMAND (MARCORLOGCOM)/ BLOUNT ISLAND COMMAND (BIC)

OVERVIEW

MARCORLOGCOM is the lead for attaining, maintaining, and providing logistics support for Marine Corps prepositioned equipment and supplies. MARCORLOGCOM also plays a key role in the Marine Corps Prepositioning Programs by providing direct input to the determination of the PO for packaged POL for ground equipment, personal demand items, personal equipment, health service support (HSS) supplies, and repair parts. BIC, a subordinate command of MARCORLOGCOM, plans, coordinates, and executes the repair, replacement, stock rotation, and load planning efforts for the Prepositioning Programs.

THE MPF MAINTENANCE CYCLE (MMC)

BIC executes the MPF mission by means of the MMC which is a continuous process that renews the equipment and supplies embarked on each MPS. Alternating between the two MPSRONs, MPS will sequentially depart assigned Areas of Operation (AO), arrive at BIC, and offload its equipment and supplies. The equipment and supplies undergo a 60–100 day process during which they are inspected, repaired, replaced, and/or rotated. The MMC process is completed when all the MPS in both MPSRONs are back-loaded with condition code A, SL-3 complete equipment and accompanying supplies. The majority of the work is done on site at BIC, but some maintenance is conducted at the depots or other locations. Replacement items are sent to BIC based on the requirements and the backload schedule for each MPS. During this same period, each MPS will undergo its own maintenance cycle at contracted shipyards within CONUS. Each ship returns to BIC upon completion of its shipyard maintenance, is back-loaded, and returns to its assigned AO. In one year during MMC-11, 1,156 active duty, government service and contractors processed approximately 2,800 principle end items and 1,300 TEUs. Figure 19 lists the dates of MMC 1 through 12. A detailed discussion of the MMC may be found in Appendix H.

Figure 15 | MMC Historical Dates

	Start	*Finish*
MMC-1	4-Oct-86	2-May-89
MMC-2	1-Jun-89	10-Aug-90
MMC-3	19-Nov-91	19-Apr-94
MMC-4	5-May-94	3-Sep-96
MMC-5	5-Sep-96	12-Jan-99
MMC-6	21-Jan-99	29-May-01
MMC-7	30-May-01	17-Feb-04
MMC-8	1-Dec-03	3-Jul-07
MMC-9	30-May-07	21-Jul-10
MMC-10	15-Sep-10	14/01/14
MMC-11	23-Jan-14	14-Feb-17
MMC-12	Feb-17	Feb-20

Note: Operations Desert Shield/Desert Storm (DS/DS) occurred during MMC-2 and MMC-3. This is the only time the Marine Corps ceased MMC operations at Blount Island Command (BIC) as they deployed to Al Jabil to conduct Reconstitution planning.

APPENDICES

APPENDIX A: MPF HISTORY

The history of the MPF Program is provided below and reflects the development and refinement of the program since inception. They include the development and growth of the program, the enhancement of the program's capabilities, and MPF realignment.

1977-1980 (Origin)

In 1977, Presidential Review Directive 18 was signed by President Carter and created the Rapid Deployment Joint Task Force (RDJTF) to fill the gap in military forward presence in the Persian Gulf. By 1980, the Marine Corps had equipment and supplies aboard seven MSC chartered vessels as part of an interim prepositioning and forward presence capability known as the Near Term Prepositioning Force (NTPF).

These dedicated ships were loaded in Wilmington, North Carolina in July 1980 and the NTPF became fully operational in 1981. The equipment and ship maintenance for the NTPF was conducted in Naha, Okinawa and Subic Bay Naval Base, Republic of the Philippines during designated maintenance periods. In 1981, planning was initiated for a more permanent prepositioning force.

Marine Corps Logistics Base, Albany, Georgia began to obtain equipment and 30 days of supplies (all classes) for the permanent prepositioning force. Concurrently, MSC began contracting for ship conversions and for new ships. The result was 13 ships organized into three squadrons, depicted in the below figure and strategically located to support global coverage. The MPF program became operational between 1984 and 1986.

The Original 13 MPS

Operating Company	*Waterman*	*Maersk*	*Amsea*
Vessel Name	SS OBREGON SS KOCAK SS PLESS	MV HAUGE MV PHILLIPS MV BONNYMAN MV BAUGH MV ANDERSON	MV LUMMUS MV BUTTON MV LOPEZ MV WILLIAMS MV BOBO
Maximum Speed	20 knots	16.4 knots	17.7 knots
Draft	34 feet/ 10.36 meters	33 feet/ 10.05 meters	33 feet/ 10.05 meters
Range	13,000 NM	10,000 NM	12,000 NM

Note: Data provided as general ship capacity/capability. Actual numbers may vary and should be confirmed with the MPSRON Staff or MSC.

The Original 13 MPS

1984-1986 (Activating MPF)

MPSRON-1 became operational in 1984 on the U.S. east coast, supporting the 6th Marine Amphibious Brigade (MAB) (all MABs were re-designated to MEBs in the late 1980s), and was relocated following Operation Desert Storm to the Mediterranean Sea to establish a forward presence in the European theater. MPSRON-2 replaced the NTPF ships in the Indian Ocean (Diego Garcia) in 1985 and continued to support 7th MAB based at Camp Pendleton, California. The first two squadrons were loaded at Wilmington, North Carolina in 1984-85. MPSRON-3 was established in the Pacific Ocean (Guam and Tinian) in 1986 supporting 1st MAB based in Hawaii. The third squadron was loaded at Panama City, Florida in 1986. The ammunition for all three squadrons was loaded at the Military Ocean Terminal, Sunny Point, North Carolina.

1990 (Desert Shield/Desert Storm)

Operation Desert Shield/Desert Storm (DS/DS) validated the MPF concept when the MPF supported the establishment of the first self-sustaining, operationally capable force in northern Saudi Arabia. The first battalion of the 7th MEB occupied its defensive positions within four days of the MPS arrival. The first nine MPF ships from MPSRON-2 and MPSRON-3 offloaded in August 1990 and provided equipment and 30 days sustainment for two-thirds of the Marine Corps forces ashore, as well as supporting United States Army forces. The ships of MPSRON-1 offloaded in December 1990.

1999-2003 (Enhancement Ship)

Based on lessons learned from DS/DS, enhancement ships (E-ships) were requested from Congress and in 1999, the first of three E-ships was added to the original 13 vessels, with one E-ship planned for each MPSRON. By 2003, all three E-ships, depicted in following chart, were operational. The E-ships provided additional space to support the loading of a 500 bed Fleet Hospital, a Naval Mobile Construction Battalion (NMCB) or Seabee Battalion, and an Expeditionary Airfield (EAF) to each MPSRON.

In January 2003, 11 MPS were offloaded in support of Operation IRAQI FREEDOM (OIF) and reconstituted between July and November 2003. In February 2004, selected equipment and supplies from MPSRON-2 were used in support of OIF-II.

The Enhancement MPS

Operating Co.	*Keystone*	*Keystone*	*Keystone*
Vessel Name	USNS MARTIN	USNS STOCKHAM	USNS WHEAT
Maximum Speed	17 knots	24 knots	20 knots
Draft	36 feet/ 10.97 meters	35 feet/ 10.66 meters	35 feet/ 10.66 meters
Range	16,000 NM	12,000 NM	12,000 NM
Remarks	Any water produced and stored on E-ships is to support Ship's Crew and the Offload Preparation Party (OPP). E-ships do not have any water or fuel discharge capabilities		

2003 (Ship Remix)

During Operation IRAQI FREEDOM, 11 MPS were already downloaded and presented an excellent opportunity to re-configure the MPS Squadrons in order to balance the square footage and container lift capability and to enable the mirror imaging of like ships in each MPSRON that is still in effect today.

A detailed analysis was conducted and the Commandant of the Marine Corps approved the concept in June 2003. That same month, a SPMAGTF was established to execute the remix, which was completed by November 2003.

As a result of the remix plan, MPSRONs were reconfigured from homogeneous composition (each squadron composed of mainly one class of ship) to heterogeneous composition (every squadron as alike as possible with regard to composition). This remix mitigated programmatic and operational challenges based on ship characteristics and load-out capabilities and increased interoperability. Ancillary benefits of this approach included increases to the overall level of training, familiarity, and technical expertise of the Navy and Marine Corps operating forces for in-stream and pier-side offloads, and provided the ship operating companies with greater flexibility to rotate crews globally.

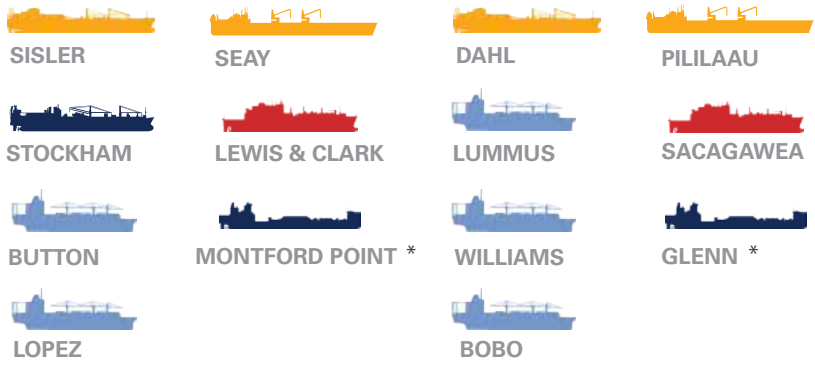
2008-2012 (New Platform Integration & Deactivations)

The introduction of additional armor for vehicles in order to improve survivability caused excessive stress loading on the five MAERSK ships, resulting in buckling between frames on vehicle stowage decks. The decision was made to eliminate the MAERSK ships, which were also close to the end of their leasing period, and replace them with three Large, Medium Speed, Roll-on/roll-off (LMSR) ships, which are designated T-AKRs. As a result of this transition, additional capacity for containers and bulk fuel had to be leased, augmenting the MPF program by one container ship, the USNS FISHER and one fuel tanker ship, the USNS GIANELLA.

Transition to Two MPSRONs

MPSRON-2 DIEGO GARCIA

MPSRON-3 GUAM/SAIPAN



% of MEB 30-day requirement	*MPSRON-2*	*MPSRON-3*
Square Feet	71%	67%
20-Foot Containers	61%	67%
Fuel	37%	50%
Water	13%	15%

Average squadron capacity is 69% of MEB square-foot lift requirement.
**Final delivery and MPSRON assignment TBD*

2013 -2015 (MPS Realignment & New Platforms)

As agreed to by the Under Secretary of the Navy on 20 April 2012 and the President's Budget-13, MPF posture and MPSRON composition depicted above continue to support GCC-stated OPLAN requirements; provide global coverage, forward presence, and crisis response; and accepts risk. The Marine Corps views this risk as acceptable given the continued funding of two enhanced MPSRONs, comprised of sufficient lift capacity forward-deployed, along with the procurement of one additional T-AKR, two T-AKEs, and two ESDs.

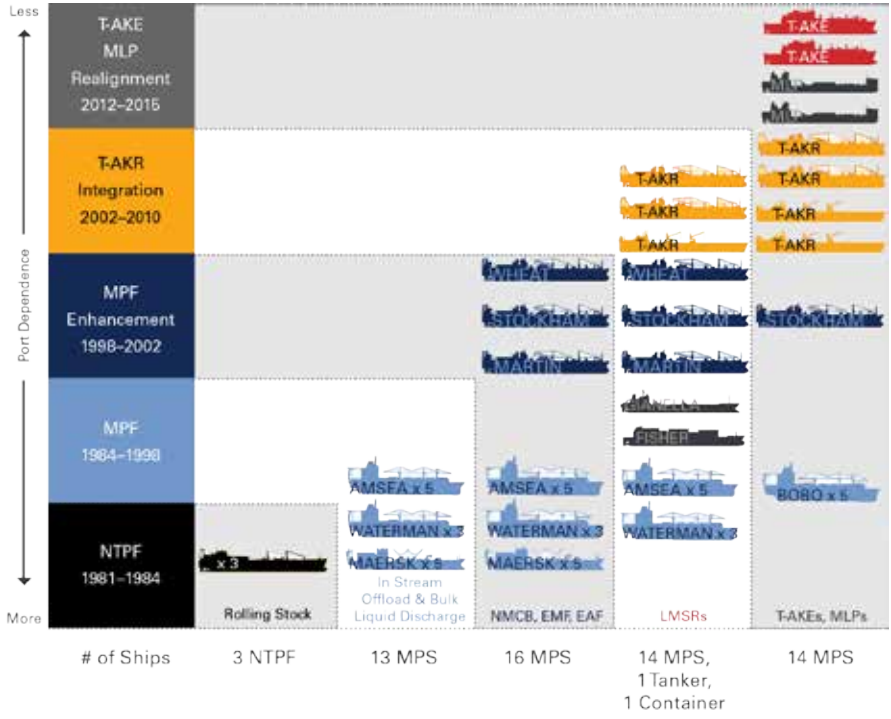
T–AKEs are uniquely designed to provide multiproduct logistics support and provide MPF break-bulk stowage and a selective offload capability. This versatile supply platform maintains robust underway replenishment capabilities for both dry and wet cargo that can re-supply other ships in the squadron and ground forces as required.

The ESD is a large auxiliary support ship that helps provide enhanced throughput capability for the MPF and facilitates delivery of vehicles, equipment, personnel, and supplies to restricted access locations ashore. These ships significantly

reduce dependency on foreign ports, provide support in the absence of a port, and are especially useful during disaster response and for supporting forces once ashore. Troops, equipment, and cargo will be transferred to the ESD by T-AKRs and then moved ashore by surface connectors.

A summary of the evolution of MPF capability from its inception to the present is provided in the diagram below.

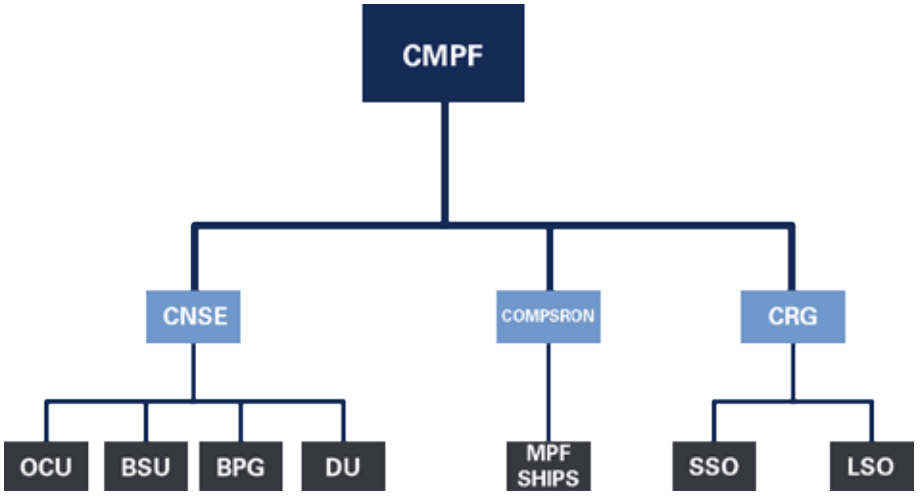
MPF Ship Evolution



APPENDIX B: NAVY FORCES SUPPORTING MPF OPERATIONS

The U.S. Navy provides critical enablers for the conduct of MPF operations. The Navy task organizes forces into four main elements to provide the critical infrastructure that facilitates the offload and reconstitution of MPF shipping.

Navy Forces Supporting MPF Operations



Commander, Maritime Prepositioning Force (CMPF): The CMPF and his staff are a task organized command element established for the offload and back-load of MPF operations. In order to best facilitate the timely and efficient conduct of MPF operations, the CMPF and his staff coordinate their actions with the MAGTF Commander and his staff. The CMPF establishes a staff to handle command functions and provide tactical level command, control and coordination of the MPS, offload elements, and seaward force protection. A depiction of this organization is provided above.

Commander, Navy Support Element (CNSE): The Naval Beach Group (NBG) Commander is normally designated Commander, NSE. The NSE supports MPF operations by providing the personnel and materiel that will facilitate the offload and backload of MPF shipping in-stream and/or pier-side. The NSE is composed of the Offload Control Unit (OCU) which directs the ship to shore movement via offload control elements (OCEs) for each ship; the Beach Support Unit (BSU) responsible for base camp, transportation, supply, construction, and lighterage support; the Beach Party Group (BPG) which provides craft to control the surf zone and vehicular/cargo control on the beach; and the Defense Unit (DU) which

provides defensive combat operations for the NSE. The NSE parent organizations and their capabilities are listed in the table below.

MPF Navy Support Element

Parent Organizations	Critical Enablers for the conduct of MPF Operations
Amphibious Construction Battalion (ACB)	Construct, operate, and maintain Navy Lighterage assets, such as causeway ferries, warping tugs, and Roll-on, Roll-off Discharge Facility (RRDF). Construct and operate an 850 man NSE camp for one MPSRON. (Construct and operate a 1,200 man NSE camp when supported by ACB assets from home port.) NSE camps include the following capabilities: command and control, berthing, electrical generation, water purification, galley, showers, heads, medical, CBR defense, and other Quality of Life (QOL) assistance.
Assault Craft Unit (ACU)	Operate and maintain assault craft for ship-to-shore movement and offload of MPF ships
Navy Cargo Handling Battalion (NCHB)	Trained and equipped to load and unload Navy and Marine Corps cargo carried on MPF ships, merchant breakbulk ships, container ships, and military/commercial aircraft. Operate and maintain expeditionary ocean and air cargo terminals.
Beach Master Unit (BMU)	Trained and equipped to facilitate the movement of troops, supplies, and equipment over beaches to and from MPF ships. Trained and equipped to facilitate the evacuation of casualties and Prisoners of War (POWs).

The NSE provides the following resources for the in-stream offload of an MPSRON:

- Crews to support the operation of 2 LCM-8s and 7 Utility Boats (UBs)
- Crews to operate 2 to 3 Amphibious Bulk Liquid Transfer Systems (ABLTS)
- Crews to man 11 Causeway Ferries (CF) (24 hour operations)
- Crews to man 5 Warping Tugs (WT) (24 hour operations)
- Hatch teams to conduct Lift-on/Lift-off (LO/LO) operations
- Crews to build and operate a Roll-On Roll-Off Discharge Facility (RRDF)

- Beach Party Teams for in-stream operations
- Manpower capability to build an 850-man NSE camp

The capabilities and manpower required for a pier-side offload of one MPSRON are significantly less than those needed for an in-stream offload. Consequently, for pier-side operations, the manning structure needed to facilitate simultaneous LO/LO and Roll-On/Roll-Off (RO/RO) operations is reduced. For pier-side operations the various Naval Commands provide sufficient personnel to the NSE units to accomplish the mission set forth in the concept of operations.

Commander, Maritime Prepositioning Ships Squadron (COMPSRON): The COMPSRON and his staff operate under the administrative control of the MSC, U.S. Transportation Command (USTRANSCOM) and under the operational control of a numbered fleet commander. The command relationship for the COMPSRON may change when the ships are offloaded in support of MAGTF operations. Upon completion of the offload, the ships of the MPF may remain in the area to support reconstitution or become part of the strategic sealift common user sealift pool (CUSP) for USTRANSCOM. The COMPSRON staff may remain onboard the MPS or augment personnel requirements for the numbered fleet commander. During MPF operations, the COMPSRON staff coordinates the arrival and departure of MPSRON ships to anchorage or port facilities within the AOR. In addition, the COMPSRON staff may coordinate ship movements for MSC chartered ships supporting MAGTF operations in a particular theater.

Coastal Riverine Group (CRG): Personnel, materiel, and equipment from a CRG provide force protection in the MPF Arrival Assembly Area (AAA). The Seaward Security Officer (SSO) is responsible for establishing and promulgating seaward security and exclusion zones. The Landward Security Officer (LSO) is responsible for landward surveillance and security response, including preplanned responses for threats such as terrorist, conventional, or special forces attacks. This protection is accomplished through a broad array of command, control, and harbor protection capabilities for harbor approach defense, harbor defense, and port security. The CRG equipment and supplies are not loaded aboard MPSRONs and are FIE.

APPENDIX C: MPF CAPABILITY SETS AND QUICK ACCESS/SPECIAL STOWAGE

Capability Sets are blocks of equipment packaged together to perform a specific capability. These assets are not in addition to the prepositioning objective but rather are part of it. Every attempt is made to construct these capability sets from assets belonging to the same MSE. Capability sets are designed to support arrival and assembly, humanitarian or disaster relief missions. Quick access/special stowage cargo consists of assets requiring either special handling or special access due to the nature of the mission they support. The following text provides a brief description of the capability sets and quick access/special stowage assets, and is followed by a chart that reflects how these capabilities are spread-loaded across the MPSRONs for the planned MMC-11. The TEU and pallet quantities and composition of these sets are subject to change due to changes in load configurations and refined guidance.

Capability Sets

Fuel Distribution - The Fuel Distribution Capability Set includes 4 capabilities. The Amphibious Assault Fuel System (AAFS) is the largest tactical fuel system and provides 1.2 million gallons of bulk fuel storage supporting the refueling of all MAGTF elements and equipment. The system can receive fuel from offshore, rail, tank trucks, or other storage facilities. In addition to storage, fuel can be transferred to another storage site or dispensed to individual containers, vehicles, tank trucks, and other fuel systems. Tactical Airfield Fuel Dispensing System (TAFDS) stores 320,000 gallons of fuel and is similar to the AAFS, but designed to support fueling of aviation assets. The Helicopter Expedient Refueling System (HERS) is designed for support of helicopter operations in advanced areas and remote sites. Each HERS contains eighteen 500 gallon collapsible drums and three 3,000 gallon collapsible tanks and can hold up to 18,000 gallons of fuel. The Ground Expedient Refueling System (GERS) is designed for support of ground vehicles in advanced positions. The GERS is easily transportable and highly mobile. It can operate two refueling points and is normally used in conjunction with 500-gallon collapsible fuel drums or 3,000 gallon collapsible fuel tanks.

Water – This capability set provides a bulk water capability for immediate storage and production, as well as a limited dispensing capability. This set provides an operationally flexible 80,000 gallon storage and distribution capability comprised of 20,000 gallon water storage tanks. Each set contains two tactical water purification units, each of which can produce up to 1500 gallons of fresh water per hour.

Food – Each set supports 750 to 1,000 persons, while the maximum capability supports 4,000. For a notional MPF MEB, additional equipment must be offloaded in order to support a feeding volume of approximately 16,000 Marines and Sailors.

Habitability - Each habitability set is designated to provide initial tent camp and billeting requirements and consists of single container modules, each of which can support and shelter 80 Marines.

Medical – This medical set is designated for the LCE and consists of a 20-bed surgical and holding capability. This capability set should not be confused with the Expeditionary Medical Facility discussed under the MPF Characteristics section in the document text.

Security - This capability set is designed to provide the MAGTF commander with an initial security capability to deter pilferage and terrorist activity during the offload of MPS.

Quick Access/Special Stowage

CBRN – Chemical, Biological, Radiological, and Nuclear Equipment: The notional MEB T/E does not reflect the total requirement for all CBRN assets. CBRN assets are intended to be the third suit in the MEB deployment, the other two are designated as FIE. These assets are designed for LCE-managed replacement and replenishment and also includes CBRN items that are listed as Using Unit Responsible Items (UURI) within an SL-3 for assets prepositioned aboard MPS.

Wash Rack System – Before the backload of an MPF operation, all maritime prepositioning equipment and supplies offloaded OCONUS must be washed and pass an inspection by U.S. Customs and the U.S. Department of Agriculture. The wash rack system provides the ability to wash equipment and move it to a quarantine area through the use of its crossover or can be used as two individual ramps. A new commercial grade pressure washer has been added to this set to provide operating forces a complete capability. Consumable items such as sponges, soap rags, etc. are a using unit responsibility and should be a part of the FIE.

Armoring Assembly Set – This kit provides the tools and equipment required to facilitate the cab assembly process during Arrival and Assembly. This set must be augmented by either the MTVR Wrecker, 7Ton Crane, ship's forklift or some other lifting mechanism capable of moving the cab, doors and MCTAGS from the bed of the truck. Generally these are loaded on the BOBO Class vessels due to their low deck heights which prevent MTVRs from being loaded with their cabs mounted.

MCTAGS (LVSR and MTVR) – Marine Corps Transparent Armored Gun Shield: These Quick Access Containers are mainly found on the BOBO Class ships due to their limited deck heights. When motor transport assets cannot be stowed on a deck with their MCTAGS and it is not possible to mobile load them, the MC-TAGS are placed inside a 20' Container and loaded on the weatherdeck for quick access. MCTAGS are compatible with all various crew-served weapon mounts while providing protection from direct small arms fire and IED fragments.

ARFF – Aircraft Rescue Fire Fighting: This capability provides the aircraft basing site with aircraft rescue/recovery and fire-fighting to support the arrival of the flight ferry and follow-on aviation operations.

EMF – Expeditionary Medical Facility: One EMF is loaded aboard one MPS of each MPSRON and provides enough equipment and supplies to establish a theater hospital facility with up to level III care. It contains 150 beds, four surgical operating tables, and contains 30 days of supply sustainment.

NSE – Navy Support Element: NSE capability sets support the NSE mission to facilitate the offload and backload of MPF shipping in-stream and/or pier-side, as well as beach support operations. They are:

NSE Headquarters (NSE HQ) – This headquarters module provides tentage, equipment, and vehicles necessary for the establishment of the stand-alone NSE headquarters.

Base Camp Module (BCM) – This module provides the tentage, equipment, vehicles and supplies for the NSE base camp.

Beach Party Module (BPM) – This module provides tentage, equipment, vehicles and amphibian vehicles to support a stand-alone Beach

Party Team.

Amphibious Bulk Liquid Transfer System (ABLTS) – This module provides the equipment and kits to support bulk water and fuel transfer.

Roll-on/Roll-off Discharge Facility (RRDF) – This module provides the equipment, vehicles, kits and lighterage to operate the RRDF.

Craft Support Module (CSM) – This module provides the tentage, vehicles, lighterage and maintenance shops required for a stand-alone capability to perform lighterage support and repair.

NCE – NCE capability sets are composed of several modules for use by the NMCB, or Seabees. They are:

Seabee Construction Module (SCM) – This core module for Seabees provides tools, equipment and sustainment for 125 personnel.

Seabee Sustainment Module (SSM) – This module provides unit level troop sustainment capabilities, as well as some spread-load equipment.

Equipment Maintenance Module (EMM) – This module provides a unit level equipment maintenance capability, as well as some spread-load equipment and sustainment capability.

P29 (Naval Construction Regiment - NCR) – This module provides command and control to Seabees assigned to the Navy Expeditionary Combat Command throughout the full ROMO.

Command and Control Module (CCM) – This module provides unit level command and control capability, as well as some spread-load equipment and sustainment capability.

P32 Construction Capability Augment (CCA) – This module provides a Water Well Drilling Rig.

EAF – Expeditionary Airfield: Each MPSRON is spread loaded with one EAF set which includes airfield surfacing (AM-2), arresting gear (M-31), and terminal guidance, but requires augmentation from aviation support packages flown in on FIE in order to install a fully operational all weather aviation forward operating base.

CAPABILITY SETS
QUICK ACCESS/SPECIAL STOWAGE

MPSRON 2

Capability Sets	BUTTON	LOPEZ	STOCKHAM	SISLER	SEAY	LEWIS & CLARK*
	NUMBER OF TEUS OR PALLETS					
FUEL DISTRIBUTION SYSTEM						
Amphibious Assault Fuel System (AAFS)	**37**	**34**	**54**			
Tactical Airfield Fuel Dispensing System (TAFDS)	**13**	**13**	**26**		**13**	
Helicopter Expedient Refueling System (HERS)	**2**	**4**		**2**	**2**	**6**
Ground Expedient Refueling System (GERS)	**2**	**2**		**2**	**2**	**7**
WATER	**5**				**5**	
FOOD (MREs)	**4**				**5**	
HABITABILITY	**13**					**208**
MEDICAL	**3**					**48**
SECURITY	**2**					**32**
Quick Access / Special Stowage						
CHEMICAL BIOLOGICAL RADIOLOGICAL NUCLEAR (CBRN)	**6**	**6**	**6**			**11**
WASH RACK SYSTEM	**4**	**4**	**4**	**4**	**4**	
ARMORING ASSEMBLY SET	**2**	**1**	**2**			
COMMUNICATIONS (COMM VANS)	**6**	**7**	**2**	**6**	**2**	
AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF)	**1**					
EXPEDITIONARY MEDICAL FACILITY (EMF)				**168**		
NSE (NSE HQ, BCM, BPM, ABLTS, RRDF, CSM)	**2**	**2**	**3**	**3**	**3**	**2**
SEABEE CONSTRUCTION MODULE (SCM)			**11**	**11**	**11**	
SEABEE SUSTAINMENT MODULE (SSM)					**10**	
SEABEE EQUIPMENT MAINTENANCE MODULE (EMM)				**10**		
SEABEE COMMAND AND CONTROL MODULE (CCM)			**8**			
SEABEE NMCB P29, NAVAL CONSTRUCTION REGIMENTS (NCR)		**4**				
SEABEE NMCB P32, CONSTRUCTION CAPABILITY AUGMENT (CCA)			**2**			
EXPEDITIONARY AIRFIELD (EAF) (FLAT RACKS)	**85**	**80**	**125**			

**Numbers reflect pallet quantities.*

CAPABILITY SETS
QUICK ACCESS/SPECIAL STOWAGE

MPSRON 3

Capability Sets	LUMMUS	BOBO	WILLIAMS	PILILAAU	DAHL	SACAGAWEA*
	NUMBER OF TEUS OR PALLETS					
FUEL DISTRIBUTION SYSTEM						
Amphibious Assault Fuel System (AAFS)	**37**	**37**	**71**			
Tactical Airfield Fuel Dispensing System (TAFDS)	**13**	**13**	**14**	**13**	**13**	
Helicopter Exp Refueling System (HERS)	**2**	**2**	**2**			**6**
Ground Expedient Refueling System (GERS)	**2**	**2**		**2**	**2**	**7**
WATER		**5**		**5**		
FOOD (MREs)		**4**		**4**		**68**
HABITABILITY		**13**				**416**
MEDICAL		**3**				**21**
SECURITY		**2**				**32**
Quick Access / Special Stowage						
CHEMICAL BIOLOGICAL RADIOLOGICAL NUCLEAR (CBRN)	**9**	**9**	**6**			**11**
WASH RACK SYSTEM	**4**	**4**	**4**	**4**	**2**	
ARMORING ASSEMBLY SET	**1**	**1**	**1**			
COMMUNICATIONS (COMM VANS)					**8**	
AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF)				**1**	**1**	
EXPEDITIONARY MEDICAL FACILITY (EMF)					**168**	
NSE (NSE HQ, BCM, BPM, ABLTS, RRDF, CSM)	**2**	**2**	**2**	**3**	**3**	**2**
SEABEE CONSTRUCTION MODULE (SCM)			**11**	**11**	**11**	
SEABEE SUSTAINMENT MODULE (SSM)				**10**		
SEABEE EQUIPMENT MAINTENANCE MODULE (EMM)					**10**	
SEABEE COMMAND AND CONTROL MODULE (CCM)			**8**			
SEABEE NMCB P29, NAVAL CONSTRUCTION REGIMENTS (NCR)	**4**					
SEABEE NMCB P32, CONSTRUCTION CAPABILITY AUGMENT (CCA)			**2**			
EXPEDITIONARY AIRFIELD (EAF) (FLAT RACKS)	**85**	**85**	**125**			

**Numbers reflect pallet quantities.*

APPENDIX D: STRATEGIC AIRLIFT SORTIES

The notional MPF MEB will require strategic airlift for FIE equipment sets and capabilities needed to support the combatant commanders' mission requirements. The strategic airlift numbers provided below support a notional MPF MEB force structure's equipment as identified in the NAVMC 2907. Actual requirements depend on the execution timeline and strategic sealift available to support the overall deployment timeline.

MPF Notional Strategic Airlift Sorties

Airlift Requirement	C-5	C-17	CRAF	Total
Marine Air-Ground Task Force (MAGTF) Elements				
CE	2	32	2	36
GCE	4	165	13	182
LCE	2	156	7	165
ACE	2	114	15	131
NCE	1	5	2	8
Advance Party Equipment	0	5	2	7
TOTALS	**11**	**477**	**41**	**529**
Naval Forces Supporting MPF Operations				
NSE	3	14	6	23
Advance Party Equipment		1		
TOTALS	**3**	**15**	**6**	**23**
MPF TOTALS	14	492	47	552

1. Strategic airlift supports the FIE requirements of a notional MPF MEB assigned to one MPSRON. C-17 and CRAF quantities include FIE personnel.
2. Aircraft requirements based on Boeing 747. The destination airfield must have at least a 7,000 ft runway to accommodate Civil Reserve Air Fleet aircraft.
3. The airlift requirement does not include the movement of rotary wing aircraft.

APPENDIX E: MARINE CORPS PREPOSITIONING INFORMATION CENTER (MCPIC)

Developed in 2001, The Marine Corps Prepositioning Information Center (MCPIC) is a collaboration between MARCOLOGCOM (BIC) and HQMC (LPO-2). MCPIC is a web-based application developed to provide a central location for a wide spectrum of prepositioning information and data for the MPF and MCPP-N programs.

1. The Mission Framework module provides the ability to create and manage Prepositioning programmatic mission data, including MAGTF TO&E information, over multiple fiscal years. The Mission Framework is designed to provide

the ability to tailor the Prepositioning MEB TO&E as well as any other missions that the prepositioning programs are tasked to support.

2. The Prepositioning Objective Management application provides the ability to create and manage a Prepositioning Object based off of predefined mission data from the Mission Framework. The Prepositioning Objective Management application allows for the Prepositioning Objective to be broken down to the unit/detachment level in order to validate the Approved Acquisition Objective in TFSMS.

3. The Equipment Lifecycle Management application provides the ability to manage the reference data for equipment utilized in all MCPIC 2.0 applications. Data is automatically pulled from TFSMS and FEDLOGS in order to support the Equipment Lifecycle Manager. The application is the central location for all reference data, association data, and fielding information for MCPIC 2.0.

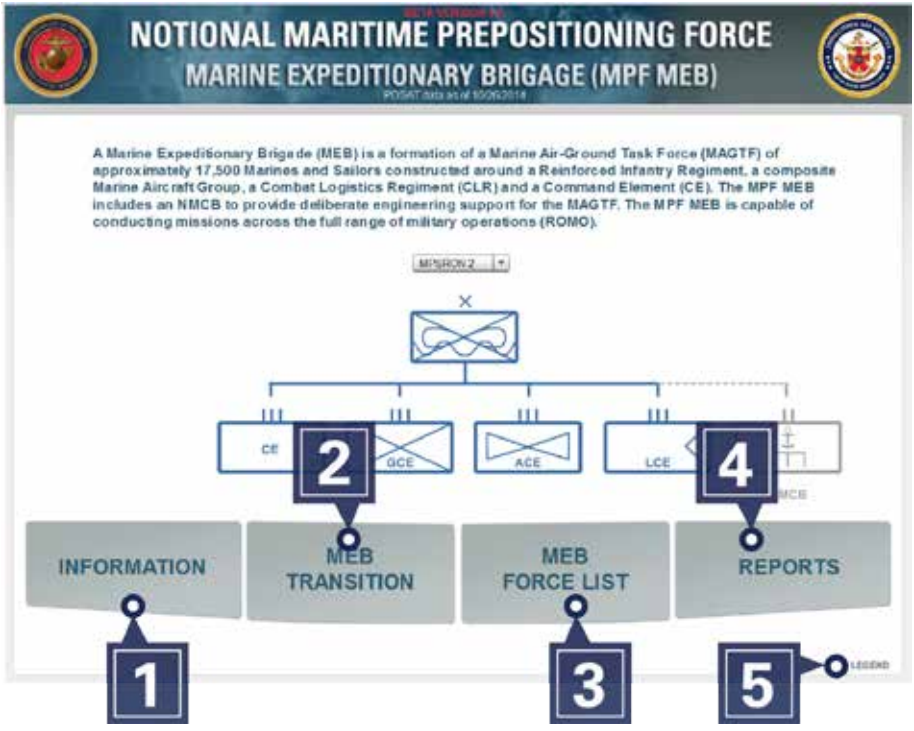
4. The MPF Maintenance Cycle (MMC) Schedule application provides users the ability to view the approved MMC Schedule.

5. Core Foundation Services is a centralized project management system that interacts with all other MCPIC 2.0 modules. The Core Foundation Services allows for the creation and tracking of projects and actionable tasks via other MCPIC 2.0 applications to provide a centralized view of project and task completion statuses.

APPENDIX F: MPF MEB FORCE STRUCTURE PLAYBOOK

The MPF MEB Force Structure Playbook was developed by HQMC (LPO-2) to provide a one-stop shopping tool to validate the notional MPF MEB TO&E with the ability to navigate throughout the MAGTF structure and drill-down to the company/detachment level and assess MOS and Class II/VII (A-E TAMCN) details.

The Playbook is an interactive Adobe Flex-based tool which is accessible through SharePoint (https://eis.usmc.mil/site/hqmclp/lpo) and runs through any internet browser window. It provides a tool for the MARFORs to use during the MPF Tailoring Process to validate the notional MPF MEB requirements, balance unit T/Os with equipment (A-E TAMCNs), and validate the PO to support MARFOR operations across the ROMO. The MPF MEB Force Structure Playbook provides summary and analysis information at the MAGTF level all the way down to companies and detachments. The user can view MPSRON 2 and MPSRON 3. Summary pages show unit-specific breakouts of equipment (TAMCN level T/E, PO, and FIEs), and manpower. The Analysis sections provide roll-up and comparison metrics to assist with balancing the TO&E.



1. The Information section contains purpose, instructions, POCs, and other update sections.
2. The MEB Transition section allows the user to view past, current, and future transition diagrams and force lists by fiscal year.
3. The MEB Force List section contains an interactive display of the MEB broken out by Major Subordinate Elements (MSE).
4. The Reports section allows users to view indicator thresholds throughout the tool and allows them to print specific units' summaries.
5. The Legend button at the bottom right of the page contains a Library of the force icons, symbols and names.

APPENDIX G: PREPOSITIONING EQUIPMENT PLAYBOOK

The Prepositioning Equipment Playbook was created by HQMC, I&L (LPO-2) as a decision-support tool and as the primary means for tracking equipment tailoring issues. The Playbook is an interactive Adobe Flex-based tool accessible through SharePoint (https://eis.usmc.mil/site/hqmclp/lpo) and can be run through any internet browser window.

The Playbook reconciles data from several sources into an easy-to-use and dynamic decision support tool. Data sources are: PDSAT, TFSMS, Item Apps, and TLCM-OST. Future releases of the Playbook will draw data from GCSS-MC. By identifying systems of record inconsistencies, the Playbook facilitates PO validation and refinement during the MPF Tailoring Process.

1. The Executive View Section provides a macro view of the enterprise and reflects relationships between programs and their advocacy by value or quantity of both AAO and On Hand.

2. The Program View Section provides attainment ratings for commodity programs, an equipment discrepancy summary and program costs.

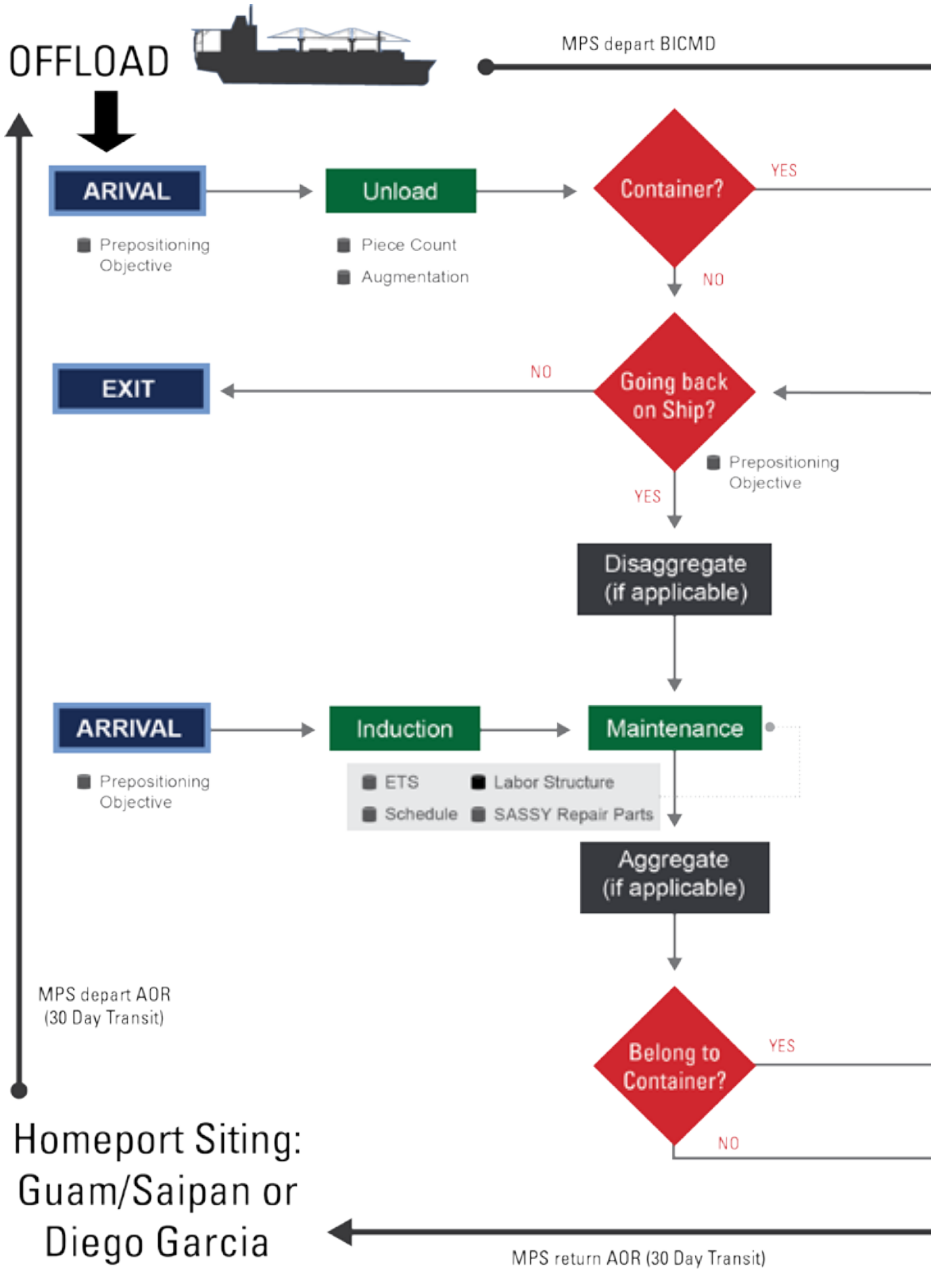
3. The TAMCN View Section provides descriptions, pictures, strategic distribution and focused prepositioning data on each PEI. This section has the capability to analyze equipment that meets specified criteria.

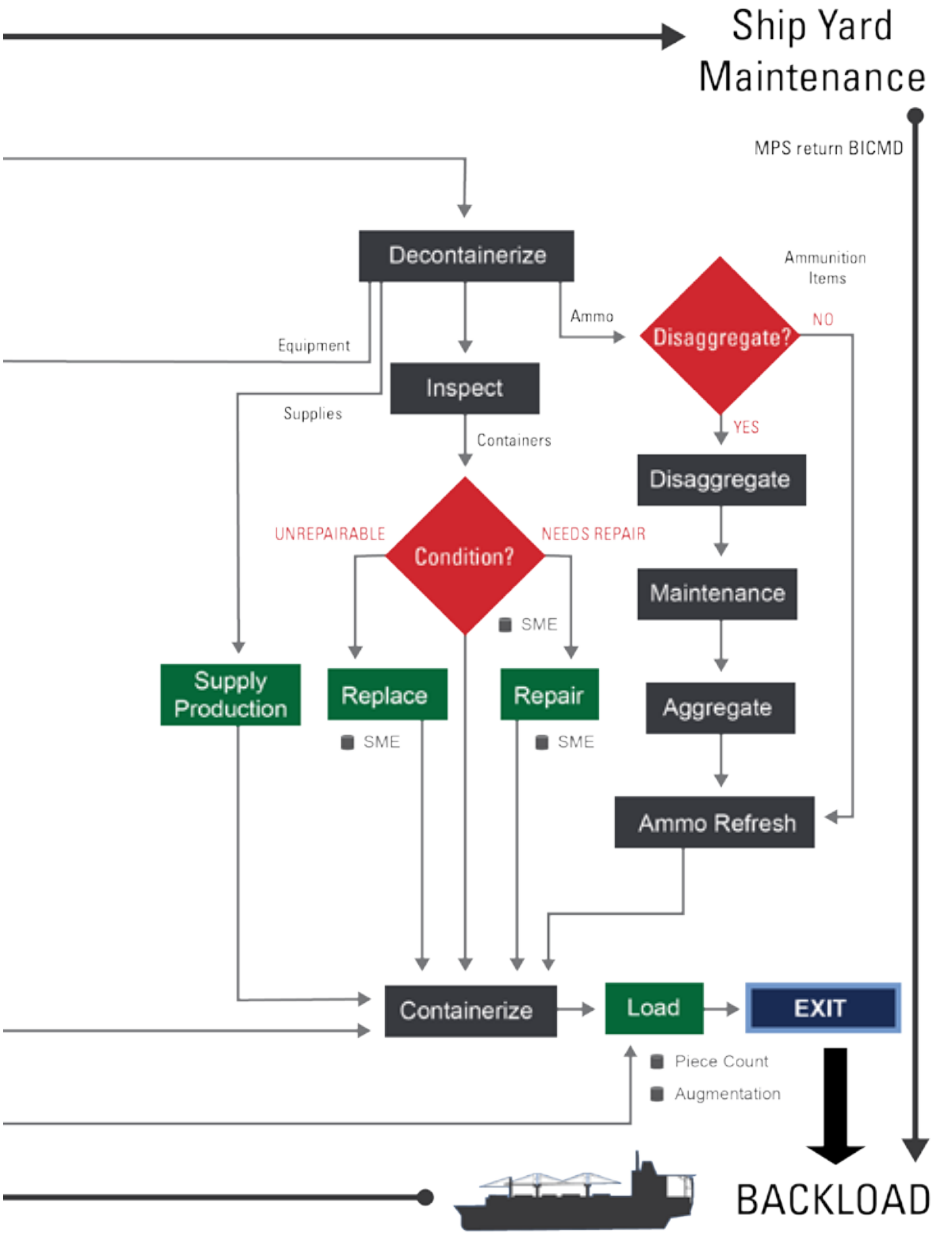
4. The Conference Support Section provides the ability to track issues related to different categories such as association, affordability, prepositioning criteria, fielding, configuration and requirements.

APPENDIX H: MPF MAINTENANCE CYCLE (MMC)

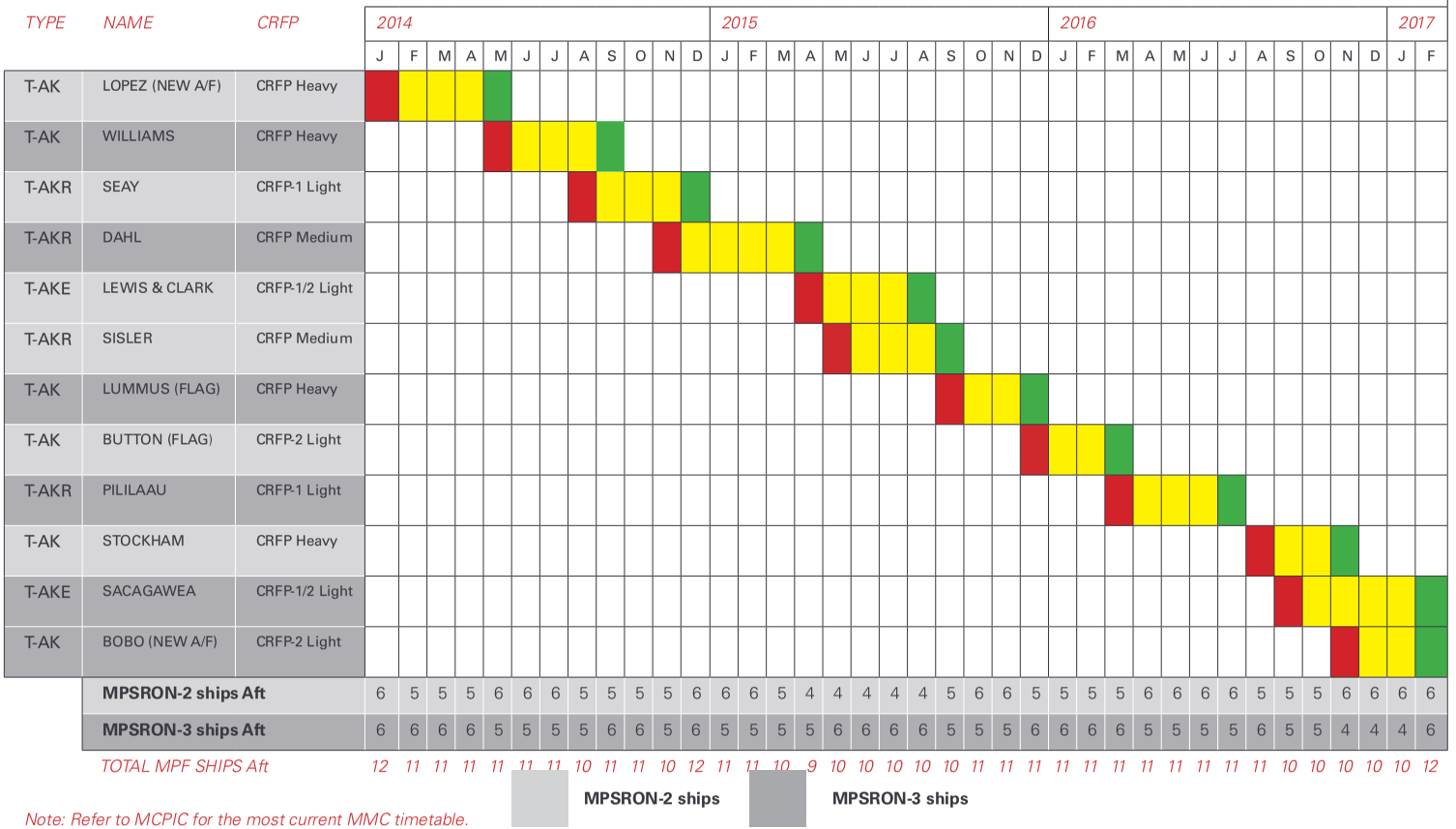
The MMC is a maintenance and supply regeneration, reconstitution, and embarkation operation that is focused on the combat readiness of MPF equipment and supplies. BIC generates the MMC plans and is responsible for their execution. All MMC activities are undertaken at BIC in Jacksonville, Florida with the exception of ammunition, bulk fuels and some depot maintenance required for certain assets. The MMC phase takes into account actions taken by the preceding acquisition and supply phases, and prepares the equipment and supplies and loads the MPS for the afloat phase which follows it. The MMC process, provided in the following chart, takes approximately 36 months for both MPSRONs and includes operating force, supporting establishment and Navy planning efforts. Actual ship off-load and back-load takes between 60 and 100 days. During the MMC the applicable MEF commander may assign a liaison team to BIC to not only oversee how equipment and supplies are being inspected, inventoried and packaged, but also in an effort to gain situational awareness of how the assets are loaded, configured and stowed aboard the MPS. The MPS returns from dry-dock or hull recertification, and embarkation of the revitalized equipment and supplies is then completed. Upon completion, information developed during the ship's MMC is posted into MCPIC as end-of-ship information so operating forces have access to everything needed to plan and execute an MPF offload.

The MMC Process




Ship Yard Maintenance
MPS return BICMD
Decontainerize
Ammunition Items
Ammo
Disaggregate?
NO
Equipment
Inspect
Supplies
Containers
YES
Disaggregate
UNREPAIRABLE
Condition?
NEEDS REPAIR
Maintenance
SME
Supply Production
Replace
Repair
Aggregate
SME
SME
Ammo Refresh
Containerize
Load
EXIT
Piece Count
Augmentation
BACKLOAD

The MMC-11 Timetable as of September 2014



TYPE	NAME	CRFP	2014 J	F	M	A	M	J	J	A	S	O	N	D	2015 J	F	M	A	M	J	J	A	S	O	N	D	2016 J	F	M	A	M	J	J	A	S	O	N	D	2017 J	F
T-AK	LOPEZ (NEW A/F)	CRFP Heavy																																				
T-AK	WILLIAMS	CRFP Heavy																																				
T-AKR	SEAY	CRFP-1 Light																																				
T-AKR	DAHL	CRFP Medium																																				
T-AKE	LEWIS & CLARK	CRFP-1/2 Light																																				
T-AKR	SISLER	CRFP Medium																																				
T-AK	LUMMUS (FLAG)	CRFP Heavy																																				
T-AK	BUTTON (FLAG)	CRFP-2 Light																																				
T-AKR	PILILAAU	CRFP-1 Light																																				
T-AK	STOCKHAM	CRFP Heavy																																				
T-AKE	SACAGAWEA	CRFP-1/2 Light																																				
T-AK	BOBO (NEW A/F)	CRFP-2 Light																																				
	MPSRON-2 ships Aft		6	5	5	5	6	6	6	5	5	5	5	6	6	6	5	4	4	4	4	5	6	6	5	5	5	5	6	6	6	6	5	5	5	6	6	6	6
	MPSRON-3 ships Aft		6	6	6	6	5	5	5	5	6	6	5	6	5	5	5	5	6	6	6	6	5	5	5	6	6	6	6	5	5	5	5	6	5	5	4	4	4	6
	TOTAL MPF SHIPS Aft		*12*	*11*	*11*	*11*	*11*	*11*	*11*	*10*	*11*	*11*	*10*	*12*	*11*	*11*	*10*	*9*	*10*	*10*	*10*	*10*	*10*	*11*	*11*	*11*	*11*	*11*	*11*	*11*	*11*	*11*	*10*	*10*	*10*	*10*	*10*	*10*	*12*

MPSRON-2 ships

MPSRON-3 ships

Note: Refer to MCPIC for the most current MMC timetable.

TABLES

TABLE I

This table provides the Prepositioning Objective (PO) of select major end items aboard the MPF and MCPP-N programs upon completion of MMC-11 (2017).

MPF & MCPP-N MAJOR END ITEMS

Nomenclature	TAMCN	MPF*	MCPP-N	Total
Combat Systems				
HMMWV/ECV ARMT CARRIER	D0030	166	87	253
TRK, UTIL, ECV, TOW CARR ARMD	D0032	32	8	40
HMMWV TOW CARR, W/SA	D1125	68	0	68
LW HOWITZER	E0671	60	12	72
AAV-C7 (RAM/RS)	E0796	18	1	19
AAV-P7 (RAM/RS)	E0846	192	13	205
AAV-R7 (RAM/RS)	E0856	8	1	9
LAV-AT	E0942	8		8
LAV-C2	E0946	2	1	3
LAV-25	E0947	28	9	37
LAV-LOG	E0948	6	3	9
LAV-MORTAR	E0949	4	2	6
LAV RECOVERY	E0950	4	1	5
TANK RECOVERY (HERCULES)	E1378	14	2	16
TANK M1A1	E1888	116	8	124
Mobile Communications				
ANTENNA MAST (TEAMS)	A0061	58	2	60
RADIO SET, AN/MRC-148	A0067	124	10	134
RADIO SET, 50-WATT DVA	A0097	1176	181	1357
RADIO SET, AN/VRC103(V)	A0126	128	15	143
RADIO SET, SVA	A0135	352	151	503
RADIO SET, AN/MRC-142C	A0153	42	3	45
RADIO SET, AN/MRC-145	A1957	160	29	189
RADIO SET, AN/PRC-150C	A2042	294		294
RADIO SET, AN/TRC-170(V)	A2179	24		24

** This column reflects total both MPSRONs 2 and 3. Refer to the current version of NAVMC 2907 or MCPIC for most recent selected equipment and supplies.*

MPF & MCPP-N MAJOR END ITEMS

Nomenclature	TAMCN	MPF*	MCPP-N	Total
Material Handling Equipment				
CRANE 25 TON, ATC	B0038	16	3	19
KALMAR	B0392	28	3	31
CRANE 7 1/2 TON	B0446	28	3	31
FORK LIFT 10K (EBFL)	B2561	92	31	123
FORK LIFT 5K (LRTF)	B2566	48	24	72
Mobile Electrical Power				
GENERATOR SET, 3 KW, 60 HZ	B0730	292	26	318
GENERATOR SET, 10 KW, 60 HZ	B0891	84	50	134
GENERATOR SET, 10 KW, 400 HZ	B0921	12	0	12
GENERATOR SET, 30 KW	B0953	160	43	203
GENERATOR SET, LTWT	B0980	24	10	34
GENERATOR SET, 60 KW, 400 HZ	B1016	12	0	12
GENERATOR SET, 60 KW, 60 HZ	B1021	96	31	127
GENERATOR SET, 100KW, 60 HZ	B1045	40	17	57
Earth Moving Equipment				
MULTI-TERRAIN LOADER	B0040	20	9	29
MEDIUM CRAWLER TRACTOR	B0060	36	6	42
GRADER, MOTORIZED	B0078	14	5	19
ASSAULT BREACHER VEHICLE	B0160	10	2	12
M9 ARMORED COMBAT EARTHMOVER (ACE)	B0589	12	2	14
FIRE SUPPRESSION SYS, MOBILE	B0626	4	12	16
SCRAPER	B1922	10	2	12
BULLDOZER MC1150	B2460	24	2	26
LOADER SCOOP	B2464	10		10
BACKHOE LOADER	B2483	20	7	27
MTVR, DUMP TRUCK (ARMORED)	D0007	90	15	105
TRK FIREFIGHTING, AIRCRAFT	D1064	16	1	17
MTVR DUMP TRUCK	D1073		6	6
Bulk Fuel And Water Storage/Movement Assets				
GROUND EXPEDIENT FUEL SYSTEM MEDIUM	B0036	20	8	28
SMALL GROUND EXPEDITIONARY REFUELING SYSTEM (S-GERS)	B0037	20	11	31

MPF & MCPP-N MAJOR END ITEMS

Nomenclature	TAMCN	MPF*	MCPP-N	Total
SHOWER UNIT, EXP, FIELD	B0055	24	12	36
LT WT WATER PUR SYSTEM	B0071	38	15	53
PETROL QLTY ANAL SYS, EN	B0087	4		4
EXP WATER DIST SYSTEM (EWDS)	B0137	8	2	10
FUEL DRUM, COLLAPSIBLE, 500 GAL	B0570	1296	126	1422
WATER DRUM, COLLAPSIBLE, 500 GAL	B0571	84	12	96
TANK, FABRIC, COLLAPSIBLE, 50K	B0572	316	66	382
FUEL TANK, COLLAPSIBLE, 3000 GAL	B0573	36	18	54
TANK, FABRIC, COLLAPSIBLE, 20K	B0574	180	50	230
TACTICAL AIRFIELD FUEL DISPENSING SYSTEM (TAFDS)	B0675	10	5	15
WATER POINT SUPPLY SYSTEM, FWD AREA	B0676	14	1	15
AMPHIB ASSLT FUEL SYS (AAFS)	B0685	8	2	10
REFUELING SYSTEM, EXP, HELO (HERS)	B1135	12	6	18
HOSE REEL SYSTEM (HRS)	B1139	8	2	10
STORAGE TANK MODULE, FUEL (SIXCON)	B2085	192	70	262
STORAGE TANK MODULE, WATER (SIXCON)	B2086	330	58	388
TANK, FABRIC, COLLAPSIBLE, WATER, 3000 GAL	B2130	88	55	143
TANK, WATER, 50K GAL	B2631	8	2	10
TANK ASSEMBLY, WATER, FABRIC, COLLAPSIBLE, 20K GAL	B2632	36	2	38

MPF & MCPP-N MAJOR END ITEMS

Nomenclature	TAMCN	MPF*	MCPP-N	Total
Motor Transport Assets				
TRUCK, ARMORED, CARGO, 7T	D0003	571	136	707
TRUCK, ARMORED, XLWB, 7T	D0005	112	57	169
TRUCK, ARMORED, DUMP, 7T	D0007	90	15	105
TRUCK, TRACTOR, 7T	D0009		4	4
CARRIER, TROOP, ARMORED, MTVR (ARMADILLO)	D0011	20	30	50
TRUCK, ARMORED, TRACTOR, 7T	D0013	60	22	82
TRUCK, ARMORED, WRECKER, 7T	D0015	66	13	79
TRUCK, UTILITY: ECV 2-DR	D0022		26	26
TRUCK, UTILITY: ECV, ARMT CARRIER	D0030	180	95	275
TRUCK, UTILITY: ECV, ARMORED 2-DR	D0033	224	88	312
TRUCK, UTILITY: ECV, ARMORED 4-DR	D0034	804	66	870
LVSR, ARMORED CARGO	D0052	195	38	233
LVSR, ARMORED, WRECKER	D0054	18	7	25
TRLR SEMI 5000GL REFUEL, MK970 (ARMD PKG)	D0215	60	26	86
TRK, CARGO 22.5 TON, 10X10, LVSR - MKR18	D0886		6	6
TRUCK, AMBUL, 4-LTR, ARMORED	D1001	58	13	71
TRUCK, AMBUL, 2-LTR, SOFT TOP	D1002	50	6	56
TRUCK, XLWB, CARGO, 7 T	D1062		6	6
TRK, FIRE FIGHTING, AIRCRAFT AND STRUCTURE	D1064	16	1	17
TRUCK, UTILITY, HMMWV	D1158	416	212	628

** This column reflects total both MPSRONs 2 and 3. Refer to the current version of NAVMAC 2907 or MCPIC for most recent selected equipment and supplies.*

TABLE II
MPS INTEROPERABILITY*

SHIP-TO-SHIP INTEROPERABILITY

PLATFORM	ESD 1, 2	T-AKE 1-2	T-AKR 302,304	T-AKR 311, 312	T-AK 3008-3012	T-AK 3017
ESD 1, 2		R-cdeg	T/R-ab	T/R-ab	R-bg	T/R-ab
T-AKE 1-2	T-cdeg	T/R - cde	T/R -c	T/R -c	T-c	T/R -c
T-AKR 302,304 LMSR (BH)	T/R - ab	R-deg	T/R-bg	T/R-bg	T/R-bg	T/R-bg
T-AKR 311,312 LMSR (WATSON)	T/R - ab	R-c				
T-AK 3008-3012 (BOBO Class)	T-abfg	R-deg	T/R-bg	T/R-bg	T/R-bg	T/R-bg
		R-c				
T-AK 3017 (STOCKHAM)	T/R-ab	R-deg	T/R-bg	T/R-bg	T/R-bg	T/R-bg
	fg	R-c				

Color Code

- Fully interoperable
- Limited
- Not interoperable
- Pending experimentation

Abbreviations

ESD 1, 2 – Expeditionary Transfer Dock
LMSR – Large Medium Speed Roll On – Roll Off ship
BH – Bob Hope class ship

Notes

T. Transfers
R. Receives
a. Skin-to-Skin Roll-on / Roll-off (ramp ops)
b. Skin-to-Skin Lift-on / Lift-off (crane ops)
c. VERTREP
d. CONREP (RAS)
e. CONREP (FAS)
f. Surface Connector
g. Pending experimentation/validation

**All interoperability data updated as of 6 March 2015*

SURFACE CONNECTOR INTEROPERABILITY

PLATFORM	RO/RO	LO/LO	FLO/FLO	LCAC/SSC	LCU 1600	LCU 2000	LCM 8	LARC-V	INLS (f)	RRDF	MPF UB	AAV
ESD 1, 2	Yes	(a)	Yes	yes	(b)	(b)	(b)	(b)	(b)	(b)	(b)	Yes (g,j)
T-AKE 1-2	No	Yes	No	No	Yes (a,c,k)	Yes (a,c,k)	Yes (a,c,k)	No	Yes (a,c,k)	No	(d)	No
T-AKR 302,304, LMSR (BOB HOPE) T-AKR 311, 312, LMSR (WATSON)	Yes	Yes	No	No	Yes (c,k)	(Yes c,k)	Yes (c,k)	Yes (c,k)	Yes (c,k)	Yes	Yes	Yes (g,j)
T-AK 3008-3012 (BOBO)	Yes	Yes	No	No	Yes (c,k)	Yes (c,k)	Yes (c,k)	Yes (c,k)	Yes (c,k)	Yes	Yes	Yes (g,j)
T-AK 3017 (STOCKHAM	Yes	Yes	No	No	Yes (c,k)	Yes (c,k)	Yes (c,k)	Yes (c,k)	Yes (c,k)	Yes	Yes	Yes (g,j)

Color Code

- Fully interoperable
- Limited
- Not interoperable
- Pending experimentation

Abbreviations

RO/RO- Roll on- Roll off
LO/LO- Lift on- Lift off
Flo/Flo- Float on – Float off
LCU- Landing Craft, Utility
LCM 8- Landing Craft, Mechanized
LARC- Lighter, Amphibious Resupply, Cargo, 5 ton
INLS- Improved Navy Lighterage System
RRDF- Roll-On/Roll-Off Discharge Facility
CWF – Causeway Ferry
UB – Utility Boat

Notes

a. Limited by crane capability
b. Pending – FY14/15
c. LO/LO Only
d. Pending – MSC engineering study
f. CWF normally in a 2+1 configuration
g. Launch only / No Recovery
j. MPF ships only - RRF and other MSC ships cannot launch AAVs.
k. Shipboard crane limited to sea-state 3

AVIATION INTEROPERABILITY

SHIP	Aviation Capability	Spot-Factor[1] / Spot	MH-60	AH-1W	AH-1Z
ESD 1	Sized to fit aircraft	4.47	Yes	No	No
	Certified Operating Spot	1	Yes	No	No
	Hangar	No	N/A	N/A	N/A
T-AKE 1-2	Sized to fit aircraft	6.99	Yes	Yes	Yes
	Certified Operating Spot	1	Yes (b,d)	Yes (b,d)	Yes (b,d)
	Hangar	2.60	Yes	Yes (i)	Yes (i)
T-AKR 302, 304 T-AKR 311, 312 (LMSR)	Sized to fit aircraft	6.53	Yes	Yes	Yes
	Certified Operating Spot	1	Yes (g,h)	Yes (g)	Yes (g)
	Hangar	No	N/A	N/A	N/A
T-AK 3008-3012 (BOBO CLASS)	Sized to fit aircraft	6.53	Yes	Yes	Yes
	Certified Operating Spot	1	Yes (g,h)	Yes (g)	Yes (g)
	Hangar	No	N/A	N/A	N/A
T-AK 3017 (STOCKHAM)	Sized to fit aircraft	6.53	Yes	Yes	Yes
	Certified Operating Spot	1	Yes (f,h)	Yes (g)	Yes (g)
	Hangar		Yes (j)	Yes (j)	Yes (j)

Color Code

- Fully interoperable
- Limited
- Not interoperable
- Pending experimentation

Legend

a = Level I, Class 1: Day and night Ops with IMC; Landing area support (Service and Maintenance facilities)
b = Level I, Class 2: Day and night Ops with IMC; Landing area with Service facilities
c = Level I, Class 3: Day and night Ops with IMC; Landing area without support facilities
d = Level I, Class 4, Ty 2 (T-Line), SP2 (T-Ball): Day and night Ops with IMC; VERTREP/External Lift Area Hover in excess of 5 feet.
e = Level I, Class 5, Ty 2: Day and night Ops with IMC; VERTREP/External Lift Area Hover in excess of 15 feet.

	UH-1N	UH-1Y	CH-53E	CH-53K[2]	MV-22B	RQ-21	Remarks
	No	No	No	No	No	Yes	Spot Factor: MH-60 Spread
	No	No	No	No	No	TBD	Coast Guard Only Spot
	N/A	N/A	N/A	N/A	N/A	N/A	
	Yes	Yes	Yes	Yes	Yes	Yes	Spot Factor: MV-22B Spread
	Yes (b,d)	Yes (b,d)	Yes (b,d)	TBD	Yes	TBD	H-53 VERTREP T-Ball Line
	Yes (i)	Yes (i)	No	No	No	TBD	Designed for (2) H-46s; (2) doors
	Yes	Yes	Yes	Yes (k,l)	No	Yes	Spot Factor: CH-53E Spread; V-22 (Deck Strength/Heating)
	Yes (g,h)	Yes (g,h)	Yes (g,h)	TBD	Yes (h)	TBD	No Support Facility / V-22: Vertrep only
	N/A	N/A	N/A	N/A	N/A	N/A	
	Yes	Yes	Yes	Yes	Yes	Yes	Spot Factor: CH-53E Spread V-22 (Deck Strength/Heating)
	Yes (g,h)	Yes (g,h)	Yes (g,h)	TBD	Yes (h)	TBD	No Support Facility / V-22: Vertrep only
	N/A	N/A	N/A	N/A	N/A	N/A	
	Yes	Yes	Yes	Yes (m)	Yes	Yes	Spot Factor: CH-53E Spread V-22 (Deck Strength/Heating)
	Yes (g,h)	Yes (g,h)	Yes (f,h)	TBD	No	TBD	No Support Facility
	Yes (j)	Yes (j)	N/A	No	No	TBD	

f = Level II, Class 2: Day and night Ops with VMC; Landing area with Service facilities
g = Level II, Class 3: Day and Night Ops with VMC; Landing area without support facilities.
h = Level II, Class 4: Day and Night Ops with VMC; VERTREP/External Lift Area Hover in excess of 5 feet.
i = Not Certified but will fit
j = Service facility with no maintenance
k = T-AKR 300 Class Parking up to Storm Sea (SS 7) limited not to exceed 49K lbs Longitudale and 54K lbs Athwart parking.
l = T-AKR 310 Class Parking no more than (SS 5) limited not to exceed 58.4K lbs Longitudale and 72.7K lbs Athwart parking.
m = T-AK 3017 Class Parking up to Storm Sea (SS 7) limited not to exceed 57.5K Athwart parking.

1. MH-60 Equivilant (1:00 = MH60S; Spot Factor per NAEC-ENG-7604 Rev V "Maximum Density Aircraft Spotting"
2. CH-53K CDR BASELINE DESIGN HELO DECK STRUCTURAL EVALUATION FOR OPS (NSWC-Carderock Ltr 9110 over Ser 65/13-40 dtd 27 Feb 13)

TABLE III
MARINE CORPS PREPOSITIONING PROGRAM REFERENCE PUBLICATIONS

MPF References

MCO 3000.17	Marine Corps Prepositioning Programs
NAVMC 2907	Prepositioning Objective (PO) for MPF and MCPP-N
MCBUL 3501	Force List for MPF MEB
MCWP 3-32	Maritime Prepositioning Force (MPF) Operations
MCWP 3-31.7	Seabasing
MCWP 3-21.2	Aviation Logistics
TM 4790-14/2_	Logistics Support for Maritime Prepositioning Force (MPF) Program Maintenance and Material Management
MCPIC	Marine Corps Prepositioning Information Center mcpic.bic.usmc.mil
LPO-2 SharePoint	https://eis.usmc.mil/site/hqmclp/lpo

MCPP-N References

TM 4790-14/1_	Technical Manual with logistics support for MCPP-N procedures.
Memorandum of Understanding (MOU)	Government of US agreement with Government of Norway for the Prestockage and Reinforcement of Norway
Prepositioning Arrangement (PA)	Detailed arrangement between the US Marine Corps and the Armed Forces of Norway for the prepositioning of USMC equipment for MCPP-N.
Terms of Reference (TOR)	The TOR sets forth the organizational structure, functions and responsibilities of specified agencies/organizations in support of MCPP-N.

TABLE IV
ACRONYMS AND ABBREVIATIONS

AAA Arrival and Assembly Area
ABLTS Amphibious Bulk Liquid Transfer System
AAFS Amphibious Assault Fuel System
AAOE Arrival and Assembly Operations Element
AAOG Arrival and Assembly Operations Group
AAV Assault Amphibian Vehicle
ACB Amphibious Construction Battalion
ACE Aviation Combat Element
ACU Assault Craft Unit
AGSE Aviation Ground Support Equipment
AM-2 Airfield Matting
AMC Air Mobility Command
AMSEA American Overseas Marine Corporation
AO Area of Operation
AOR Area of Responsibility
ATF Amphibious Task Force
BBL Barrel (42 US gallons)
BIC Blount Island Command
BMU Beachmaster Unit
CE Command Element
CLB Combat Logistics Battalion
CLR Combat Logistics Regiment
CMC Commandant of the Marine Corps
CMPF Commander, Maritime Prepositioning Force
CCDR Combatant Commander
COMPSRON Commander, MPS Squadron
CONUS Continental United States
CRAF Civil Reserve Air Fleet
DoD Department of Defense
DOS Days of Supply or Days of Sustainment
EAF Expeditionary Airfield
EMF Expeditionary Medical Facility
E-Ship Enhancement Ship
ESD Expeditionary Transfer Dock
FF Flight Ferry
FIE Fly-In Echelon
F/W Fixed-Wing Aircraft
GCE Ground Combat Element
HAZMAT Hazardous Material
HMMWV High Mobility, Multi-Purpose Wheeled Vehicle
HNS Host Nation Support
HSV High Speed Vessel
ISO International Organization for Standardization
JTF Joint Task Force
LARC-V Lighter, Amphibious Resupply Cargo
LAV Light Armored Vehicle
LCE Logistics Combat Element
LCM-8 Landing Craft, Mechanized
LMSR Large, Medium Speed RO/RO
LO/LO Lift-on/Lift-off
LSO Landward Security Officer
LVSR LVS—Replacement
MAGTF Marine Air-Ground Task Force
MAG Marine Air Group
MALS Marine Aviation Logistics Squadron
MARCORLOGCOM Marine Corps Logistics Command
MAW Marine Aircraft Wing
MCMC Marine Corps Maintenance Contractor
MCPP-N Marine Corps Prepositioning Program—Norway
MEB Marine Expeditionary Brigade
MEF Marine Expeditionary Force
MEU Marine Expeditionary Unit
MHE Material Handling Equipment
MLG Marine Logistics Group
MLP Mobile Landing Platform
MMC MPF Maintenance Cycle
MOD Ministry of Defense
MPE/S Maritime Prepositioned Equipment and Supplies
MPF Maritime Prepositioning Force
MPS Maritime Prepositioning Ship
MPSRON Maritime Prepositioning Ships Squadron
MRE Meals, Ready-to-Eat
MSC Military Sealift Command
MTMC Military Traffic Management Command
MTVR Medium Tactical Vehicle Replacement
MWSS Marine Wing Support Squadron
NALMEB Norway Air-Landed Marine Expeditionary Brigade
NBG Naval Beach Group
NCE Naval Construction Element
NMCB Naval Mobile Construction Battalion

NSE Navy Support Element
NTPF Near-Term Prepositioning Force
OIF Operation Iraqi Freedom
OPLAN Operation Plan
OPNAV Office of the Chief of Naval Operations
OPP Offload Preparation Party
PEI Principal End Item
PO Prepositioning Objective
POWG Program Oversight Working Group
PP&O Plans, Policies & Operations
PWRM Prepositioned War Reserve Material
RO/RO Roll-On/Roll-Off
ROS Reduced Operational Status
ROWPU Reverse Osmosis Water Purification Unit
RRDF Roll-On/Roll-Off Discharge Facility
R/W Rotary-Wing Aircraft
SL-3 Stock List 3 (component listing)
SLRP Survey, Liaison, and Reconnaissance Party
SPMAGTF Special Purpose MAGTF
SSO Seaward Security Officer
TAA Tactical Assembly Area
TAAT Technical Assistance and Advisory Team
TAFDS Tactical Airfield Fuel Dispensing System
T-AK Vehicle Cargo Ship
T-AKE Dry Cargo/Ammunition Ship
T-AKR Large, Medium speed, Roll-on/roll-off
TAMCN Table of Authorized Materiel Control Number
T-AVB Aviation Logistics Support Ship
T/E Table of Equipment
TEU Twenty Foot Equivalent Units
T/O Table of Organization
USMC United States Marine Corps
USNS United States Naval Ship
USTRANSCOM United States Transportation Command

CURRENT MARITIME PREPOSITIONING SHIP NAMESAKES

USNS 2ND LT JOHN P. BOBO (T-AK 3008)

2NDLT JOHN P. BOBO

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as Weapons Platoon Commander, Company I, Third Battalion, Ninth Marines, Third Marine Division, in Quang Tri Province, Republic of Vietnam, 30 March 1967. VIETNAM

USNS PFC DEWAYNE T. WILLIAMS (T-AK 3009)

PFC DEWAYNE T. WILLIAMS

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty while serving as a Rifleman with the First Platoon, Co H, Second Battalion, First Marines, First MarDiv in action against communist insurgent forces in the Quang Nam Province, Republic of VIETNAM

USNS 1ST LT BALDOMERO LOPEZ (T-AK 3010)

1STLT BALDOMERO LOPEZ

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as a Rifle Platoon Commander of Company A, First Battalion, Fifth Marines, First Marine Division (Reinforced), in action against enemy aggressors at the Inchon invasion, Korea, 15 September 1950. KOREA

USNS 1ST LT JACK LUMMUS (T-AK 3011)

1STLT JACK LUMMUS

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as Leader of a Rifle Platoon, attached to Company E, Second Battalion, Twenty-seventh Marines, Fifth Marine Division, in action against enemy Japanese forces on Iwo Jima in the Volcano Islands, 8 March 1945. IWO JIMA

USNS SGT WILLIAM R. BUTTON (T-AK 3012)

CPL WILLIAM ROBERT BUTTON

For extraordinary heroism and conspicuous gallantry and intrepidity in actual conflict with the enemy near GRANDE RIVIERE Republic of Haiti, on the night of October 31st-November 1st, 1919. HAITI

USNS GYSGT FRED W. STOCKHAM (T-AK 3017)

GYSGT FRED W. STOCKHAM

For conspicuous gallantry and intrepidity above and beyond the call of duty in action with the enemy in Bois-de-Belleau, France, on the night of June 13-14, 1918. FRANCE

USNS SGT WILLIAM W. SEAY (T-AKR 302)

SERGEANT WILLIAM W. SEAY (USA)

For conspicuous gallantry and intrepidity in action at the risk of his life as a driver with the 62d Transportation Company at Ap Nhi, Republic of Vietnam, 25 August 1968. Ambushed while on a resupply mission, his heroism and gallantry in action while repelling the enemy assault cost him his life. VIETNAM

USNS PILILAAU (T-AKR 304)

PFC HERBERT K. PILILAAU (USA)

For conspicuous gallantry and outstanding courage above and beyond the call of duty in action against the enemy on Heartbreak Ridge near Pia-ri, Korea while serving with Company C, 23rd Infantry Regiment, 2nd Infantry Division on 17 September 1951. KOREA. the 2nd Infantry Division attacked and captured a ridge in east central Korea. Their next objective was a hill mass just to the north, near Pia-ri, which would come to be known as Heartbreak Ridge.

USNS 1ST LT GEORGE K. SISLER (T-AKR 311)

1STLT GEORGE K. SISLER (USA)

For conspicuous gallantry and intrepidity at the risk of his life and above and beyond the call of duty. 1st Lt. Sisler was the platoon leader/adviser to a Special United States/ Vietnam exploitation force.Republic of Vietnam. 7 February 1967. VIETNAM

USNS SPEC 4 LARRY G. DAHL (T-AKR 312)

SPEC FOUR LARRY G. DAHL (USA)

For conspicuous gallantry and intrepidity in action at the risk of his life above and beyond the call of duty while serving as a machine gunner on a gun truck near An Khe, Binh Dinh Province, Republic of Vietnam, 23 February, 1971. VIETNAM

USNS LEWIS AND CLARK (T-AKE 1)

Commissioned by Thomas Jefferson, Captain Meriwether Louis and 2d Lieutenant William Clark, the Corps of Discovery Expedition was the first American expedition to cross the western portion of the United States. Their perilous journey lasted from 1804 to 1806 and explored and mapped the newly acquired Louisiana Purchase, found a practical route to the Pacific, and established a lasting American presence in the west.

USNS SACAGAWEA (T-AKE 2)

Sacagawea was a Lemhi Shoshone woman who accompanied the Lewis and Clark Expedition. Acting as an interpreter and guide in their exploration of the Western United States, she traveled thousands of miles from North Dakota to the Pacific Ocean between 1804 and 1806. In 2001 Sacagawea was given the title of Honorary Sergeant in the U.S. Army by the President of the United States.

USNS MONTFORD POINT (ESD 1)

From 1942-1949, approximately 20,000 African-American men enlisted in the Marine Corps and completed segregated boot camp at Montford Point Camp, Jacksonville, NC. Many of these Marines served with distinction during a number of World War II's bloodiest struggles, making the ultimate sacrifice, while others continued their service into Korea and Vietnam.

USNS JOHN GLENN (ESD 2)

COL. JOHN H. GLENN, JR.

John Glenn was commissioned in the Marine Corps in 1943 and flew 59 combat mission in WWII and 63 in Korea.. As a test pilot, he set the transcontinental record in 1957. Selected for NASA's Mercury Program, he was the first American to orbit the earth in 1962. In 1974 he was elected to the U.S. Senate from Ohio, retiring from the Senate in 1999. Glenn returned to space in 1998 on the Space Shuttle Discovery mission, and is the oldest person to have flown in space.

HISTORICAL MARITIME PREPOSITIONING SHIP NAMESAKES

MV CPL LOUIS J. HAUGE, JR. (T-AK 3000)

CPL Louis J. Hauge Jr. USMC

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as Leader of a Machine-Gun Squad serving with Company C, First Battalion, First Marines, First Marine Division, in action against a strongly fortified Japanese hill position on Okinawa on 14 May 1945. OKINAWA

MV PFC. WILLIAM B. BAUGH (T-AK 3001)

PFC William B. Baugh, USMC

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty while serving as a member of an Anti-Tank Assault Squad attached to Company G, Third Battalion, First Marines, First Marine Division (Reinforced), during a nighttime enemy attack against a motorized column en route from Koto-Ri to Hagaru-ri, Korea, on November 29, 1950. KOREA

MV PFC JAMES ANDERSON, JR. (T-AK-3002)

PFC James Anderson Jr., USMC

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as a rifleman, Second Platoon, Company F, Second Battalion, Third Marines, Third Marine Division, in Vietnam on 28 February 1967. VIETNAM

MV 1ST LT. ALEX BONNYMAN (T-AK 3003)

1st Lt Alexander Bonnyman Jr. USMC

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as Executive Officer of the 2d Battalion Shore Party, 8th Marines, 2d Marine Division, during the assault against enemy Japanese-held Tarawa in the Gilbert Islands, 20–22 November 1943. TARAWA

MV PVT. FRANKLIN J. PHILLIPS (T-AK 3004)

PVT Franklin J. Phillips, USMC

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty Private Phillips served in the presence of the enemy at the Battle of Peking during the Boxer Rebellion in China from 20 June to 16 July 1900. CHINA

USNS SGT MATEJ KOCAK (T-AK 3005)

SGT MATEJ KOCAK

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty while serving with the Sixty-sixth Company, Fifth Regiment, Second Division, in action in the Villers-Cottertes section, south of Soissons, France, 18 July 1918. FRANCE

USNS PFC EUGENE A. OBREGON (T-AK 3006)

PFC EUGENE A. OBREGON

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty while serving with Company G, Third Bn, Fifth Marines, First MarDiv (Reinforced), in action against enemy aggressor forces at Seoul, Korea, 26 September 1950. KOREA

USNS MAJ STEPHEN W. PLESS (T-AK 3007)

MAJ STEPHEN W. PLESS

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty while serving as a helicopter gunship pilot attached to Marine Observation Squadron Six in action against enemy forces near Quang Ngai, Republic of Vietnam, on 19 August 1967.

USNS 1ST LT HARRY L. MARTIN (T-AK 3015)

1STLT HARRY L. MARTIN

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as Platoon Leader attached to Company C, Fifth Pioneer Battalion, Fifth Marine Division, in action against enemy Japanese forces on Iwo Jima, Volcano Islands, 26 March 1945. IWO JIMA

USNS LCPL ROY M. WHEAT (T-AK 3016)

LCPL ROY M. WHEAT

For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty, Corporal Wheat was assigned the mission of providing security for a Navy construction battalion crane and crew operating along Liberty Road in the vicinity of the Dien Ban District, Quang Nam Province.VIETNAM

Recomended changes to this
publication may be directed to
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Installations and Logistics, LPO-2 at

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(571) 256 - 7221
(571) 256 - 7222