STRATEGY RESEARCH PROJECT

ARMY AND MARINE CORPS AFLOAT PREPOSITIONING: PROVIDING FULL SPECTRUM CAPABILITY THROUGH COMPLEMENTARY PROGRAMS

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Army and Marine Corps Afloat Prepositioning: Providing Full Spectrum Capability Through Complementary Programs

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ABSTRACT

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Before the Gulf War, shipboard prepositioning of brigade sets of equipment was the exclusive domain of the Marines and their Maritime Prepositioning Force (MPF). Now, with the stand-up of the Army Prepositioned Afloat (APA) program, both services have squadrons of ships loaded with brigade equipment sets strategically positioned near areas of potential conflict.

While the two programs are inherently complementary as a result of different Service roles and functions, pressures to create full spectrum capability threaten to draw the programs toward a common middle ground. The challenge for both the Army and Marine Corps is to resist the pressures of "who gets to do what" and develop their respective programs in a manner consistent with their individual Service core competencies.

This paper addresses the development of Army and Marine Corps afloat prepositioning programs, compares and contrasts their current capabilities, and examines short and long-term enhancement plans for each. Additionally, the paper evaluates both programs' roles in current and future warfighting, and offers recommendations to ensure they remain complementary and true to the roles and functions of their parent Services.

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ARMY AND MARINE CORPS AFLOAT PREPOSITIONING: PROVIDING FULL SPECTRUM CAPABILITY THROUGH COMPLEMENTARY PROGRAMS

> US Armed Forces as a whole must be multi-mission capable...Our forces must be proficient in their core warfighting competencies and able to transition smoothly from a peacetime posture to swift execution of multiple missions across the full spectrum of operations. They require the correct mix of capabilities between and within the Services.
>
> —1997 National Military Strategy

In a post-Cold War world filled with uncertainty and marked by diminishing defense resources, there is increasing pressure on the Services to create forces and programs whose capabilities can be applied across the full spectrum of operations. This trend is particularly apparent in the Army and Marine Corps, where relevance is increasingly defined in terms of multipurpose capability and rapid closure times. Forces and programs that can be packaged as capable across the full spectrum of operations, from humanitarian relief to major regional conflict, compete well in the battle for limited defense dollars.

But is full spectrum capability best achieved by creating a number of multipurpose forces and programs, or should it be the natural product of programs that individually focus on specific capabilities, but collectively complement each other in a way that addresses the full spectrum of requirements? A closer review of the National Military Strategy reveals that full spectrum capability must be a product of combining the capabilities of all services "as a whole."[1] By focusing on their

individual core competencies, the Services contribute tailored capabilities which, in aggregate, create the nation's full spectrum force and offer combatant commanders the best selection of capabilities to address the wide array of missions they may be assigned.

To the extent they pursue full spectrum capabilities within their individual forces and programs, the Army and Marine Corps risk watering down core competencies and creating compromise forces with redundant capabilities.

A contemporary case in point is found in the afloat prepositioning programs of both Services. Before the Gulf War, shipboard prepositioning of brigade sets of equipment was the exclusive domain of the Marines and their Maritime Prepositioning Force (MPF).[2] Now, with the stand-up of the Army Prepositioned Afloat (APA) program, both services have squadrons of ships loaded with brigade equipment sets strategically positioned near areas of potential conflict.

While at first glance the two programs might seem redundant, there is a compelling case for each capability in its pure form. True to its Service roots, MPF provides expeditionary self-sustaining Marine Air/Ground Task Forces (MAGTFs) ideally suited for low- to mid-intensity conflict. The APA, equally reflective of its Service's core competencies, provides a heavy armored brigade designed to fight sustained land campaigns.

The challenge for both the Army and Marine Corps is to resist the pressures of "who gets to do what" and develop their respective programs in a manner consistent with their individual Service core competencies. The threat is that the programs will be perceived to be in competition, and that each Service will adjust its respective program toward a common center in order to ensure its employment over a wider range of potential missions. If multimission mentality carries the day and the two programs drift to the center, the argument of redundant capabilities becomes more valid and the combatant commanders are denied the complementary capabilities the two programs would otherwise provide.

This paper will address the development of Army and Marine Corps afloat prepositioning programs, compare and contrast their current capabilities, and examine short and long term enhancement plans for each. Additionally, the paper will evaluate the programs' roles in current and future warfighting, and offer recommendations to ensure they remain complementary and true to the roles and functions of their parent Services.

THE GENESIS AND DEVELOPMENT OF AFLOAT PREPOSITIONING

The concept of prepositioning unit equipment afloat is not new. In fact, the idea dates back to the mid-1960's, when a joint Army and Navy study recommended constructing floating supply ships to preposition equipment and supplies for Army or

Marine Corps units. In 1964, the Army tested a concept to preposition one brigade's materiel afloat. The Vietnam War, however, assumed center stage and the concept was shelved.[3]

The Creation of the Maritime Prepositioning Force (MPF)

The Marine Corps resurrected the idea of afloat prepositioning in the late 1970's as a means of addressing a growing disparity between global requirements and the amphibious shipping available to meet those requirements. In 1979, the Near Term Pre-Positioning Force (NTPF) was established using existing equipment stocks and available Military Sealift Command (MSC) shipping.[4]

In March 1983 the Commandant of the Marine Corps directed the establishment of the MPF. The MSC leased 13 commercial ships, which were organized into three squadrons. Full operational capability was achieved in September 1986.[5]

The Desert Shield/Desert Storm Experience

The concept of prepositioning unit equipment afloat was validated during the Gulf War. Within eight days of the mobilization order issued on 7 August 1990, ships from MPS-2 arrived in theater from Diego Garcia. By 25 August 1990, 16,500 Marines from the 7th Marine Expeditionary Brigade (MEB) had airlifted into theater, married up with the MPS equipment, and positioned themselves for combat.[6] The tanks, heavy equipment,

and sustainment delivered by MPS-2 provided the first American armor capability in theater, and provided essential sustainment to two brigades of the Army's 82nd Airborne Division who had arrived shortly after the 7 August deployment order.[7]

On 26 August, MPS-3 arrived from Guam with additional equipment and supplies for the 1st MEB. Heavy Army forces followed, with the first completing its deployment via fast sealift ships on 23 September, 47 days after the initial deployment began.[8]

The final squadron of maritime prepositioning ships (MPS-1), which had been on standby, was eventually ordered to Southwest Asia as well, and offloaded its equipment and supplies in December 1990.[9]

The Department of Defense Mobility Requirements Study

Shortfalls in strategic lift which extended deployment times for heavy forces committed to Desert Shield became a source of concern for Congress. In the fall of 1990, the Congress directed the Department of Defense (DoD) to determine future mobility requirements for the Armed Forces and develop an integrated mobility plan.

The Joint Staff's Mobility Requirements Study (MRS), published in 1992, expressed concern over the considerable risk faced by the earliest deployed troops, and recommended a "gap filler" force be established for rapid response to a developing

contingency. This force was to provide heavy combat capability (a brigade equivalent force with approximately 120 tanks) within about two weeks of the initial deployment order. The study further called for the acquisition of additional ships to facilitate Army prepositioning afloat and improved surge sealift capacities.[10] A subsequent study published in 1995, the Mobility Requirements Study Bottom-Up Review Update (MRS BURU), revalidated the recommendations of the MRS.

The Birth of a Peer Competitor for MPF-Army War Reserve-3

At the beginning of the Persian Gulf War deployment in August 1990, Army prepositioning consisted of four ships used primarily for carrying ammunition and port handling equipment. The strategic mobility limitations experienced in the Gulf War and the proposed sealift enhancements presented by the MRS combined to energize Army planners. The Army Strategic Mobility Program Action Plan, published in March 1993, called for the development of a capability to provide a crisis response force of up to corps size with the following standards:

- a light or airborne brigade to be inserted into a theater by C+4 (four days after the deployment order), with the remainder of that division to close no later than C+12,
- an afloat heavy combat brigade with support to close in theater and be ready to fight no later than C+15,

•two heavy divisions (a mix of mechanized infantry, armored, or air assault forces) by C+30 via surge sealift,

•the remaining two divisions by C+75.[11]

The Army moved quickly to establish a heavy combat brigade's worth of equipment afloat. Primarily using war reserve stocks from the European theater that had become excess after the post-Cold War drawdown, the Army loaded seven roll-on/roll-off ships (RO/ROs) borrowed from the Ready Reserve Fleet (RRF).[12] These ships provided interim capability while the Army waited for new shipping borne from the MRS to come on-line. The interim ships were home ported at Diego Garcia, the same site as one of the MPF squadrons. The expanded prepositioning afloat program was referred to as Army War Reserve-3.

While the Army began to incorporate the new strategic mobility capabilities offered in the MRS into their new force projection blueprint, the Marine Corps countered with what it perceived as a more economical alternative. The Marines placed a proposal on the table to fill the "gap filler force" requirement identified in the MRS by enhancing the MPF program with three additional ships which would carry, among other things, an additional 84 tanks (28 per squadron), an expeditionary airfield, and heavy engineer equipment. The proposal was rejected by the Joint Staff out of concern that it might derail the MRS recommendations for the afloat prepositioning enhancements earmarked for the Army.[13]

For its part, the Army was careful to downplay any perceived conflicts between its APA program and Marine amphibious operations, although it stopped short of describing differences in employment between the APA and MPF programs themselves. Field Manual (FM) 100-17-1, Army Pre-Positioned Afloat Operations, states that:

> APA equipment provides the combatant commander a reinforcement capability to enhance an established lodgment. It does not provide the equipment necessary to conduct an amphibious assault operation-a mission of the US Marine Corps.[14]

Despite attempts by both Services to downplay any rivalry between the MPF and APA programs in their official statements, there remains under the surface a competition between the Services to make their respective program the prepositioning tool of first choice. In a recent report, the Congressional Budget Office stated the following:

> Disagreements between the Congress and the Administration about funding are the latest manifestation of a debate over whether the United States should support Army or Marine Corps prepositioning programs, or both. The fact that both services plan to expand afloat prepositioning in the midst of declining defense budgets has led to questions about overlap between the two....Since at least 1992, some Marine Corps officials have challenged the need for an Army brigade afloat....tension about which program should receive priority continues.[15]

CURRENT CAPABILITIES OF MPF AND APA

Comparisons between MPF and APA are natural because both programs employ similar means of delivering forces (airlifted

personnel marrying up with sea-based equipment and sustainment). Additionally, both programs are based on brigade-sized units which are designed to arrive early in a contingency and provide significant heavy combat power to the warfighting Commander-in-Chief (CINC).

Today's MPF-Organization/Capabilities/Employment

The Marine Corps MPF program includes 13 RO/ROs organized into three separate squadrons (MPSRONs). Each squadron contains mirror-imaged cargo designed to equip a 16,000+ strength MAGTF and sustain it for 30 days. All three squadrons remain forward deployed and are under the combatant command of the regional CINC in whose area they operate. MPSRON-1 is composed of four ships and is stationed in the Mediterranean Sea. MPSRON-2 includes five ships and is based in Diego Garcia. MPSRON-3 is a four-ship squadron based out of Guam and Saipan. Each squadron is commanded by a Navy Captain. The ships themselves are under long-term commercial lease and are manned by merchant mariners.

Each MPSRON is designed to support a force which includes a mechanized infantry regiment, one tank battalion(-), five 3x6 artillery batteries, one light armored reconnaissance company(+), and a composite helicopter/fixed wing aircraft group.[16] The fixed wing aircraft self-deploy while the rotary wing are folded and flown in aboard C-5A aircraft (approximately 30 C-5 sorties). Equipment afloat is modularized to support several different

force packages that can be employed to meet a variety of contingencies.

In addition to the ships and Marines themselves, each MPF includes a Navy Support Element (NSE) which includes a Naval Beach Group detachment, a Naval Cargo Handling and Port Group, and a Naval Security Group. The NSE links the MAGTF and the equipment aboard MPS. Its tasks include operating the ships' cranes, manning and operating the lighterage, and controlling beach and/or port operations. Offload can be accomplished either in stream or pierside. In stream offload is restricted to sea state three or better. Combat readiness is attained within ten days of arrival.

The MPSRONs are composed of three classes of RO/RO ships. While ship performance features vary somewhat, the squadrons essentially carry a maximum sustained speed of around 17 knots and draft up to 36 feet. The ships can deliver bulk liquid from up to two miles offshore, and each squadron has a 100,0000 gallon per day water production capability.

The end product provided to the warfighting CINC is a self-contained air/ground task force of up to brigade size that is capable of sustaining itself without resupply for 30 days. Each squadron is available for global duty, although basing locations would dictate which squadron(s) would be committed to a given contingency. The force itself can be employed in a variety of roles, including augmenting an amphibious operation, establishing

blocking positions for both offensive and defensive operations, establishing a sizable force ashore to enable closure of additional forces, and providing a rapid peacetime response in support of humanitarian assistance and disaster relief.[17] Airlift costs, including the NSE and helicopter transport, is approximately 249 sorties (C-5/C-141 mix).

Today's APA-Organization/Capabilities/Employment

While the Marine MPF program is broken into three separate squadrons, the APA is a singular entity based partly in Diego Garcia and partly in Guam/Saipan. It is presently composed of four converted large, medium speed roll-on/roll-off ships (LMSRs), two older RO/ROs, three lighter aboard ships (LASHs), one heavy lift prepositioning ship (HLPS), one crane ship, and two container ships.[18]

The LMSRs and RO/ROs are based in Diego Garcia and contain the equipment needed to outfit a mechanized or armored brigade and sustain it for 15 days. Augmented with aviation units and equipment airlifted into theater, the equipment could alternatively support an armored cavalry regiment. Collocated with the LMSRs and RO/ROs in Diego Garcia are auxiliary ships that would accompany them and facilitate unloading operations.

The three LASHs and two container ships are based in Diego Garcia and Guam/Saipan. These ships contain theater-opening combat service and combat service support unit equipment sets,

and additional sustainment supplies sufficient to support early deploying forces of a three-division contingency corps for 30 days.

The APA equips a force that includes four balanced battalion task forces (two infantry and two armor companies per battalion), a field artillery battalion reinforced with a multiple launch rocket system battery, a heavy division engineer battalion, an air defense artillery battery, and a chemical company.[19] The brigade set presently supports a total of 9300 soldiers. Like MPF, the equipment has been embarked in modular fashion to facilitate the employment of smaller force packages.

The APA is designed to respond to major regional contingencies in either Southwest Asia or the Korean peninsula. The goal is for the heavy brigade to be in theater, equipped, and combat effective within 15 days of a deployment order. As a subset of that, the brigade is tasked to be operational within eight days of initiating discharge. These timelines assume the availability of a sea port of debarkation that provides deep-draft berthing for multiple-ship discharge. Like MPF, the APA is capable of accomplishing in-stream discharge in sea state three or better. In the event a deep draft port or harbor is not available, in-stream discharge of cargo would extend the timelines for achieving combat readiness.[20]

Over the past several years the APA program has been replacing older RO/ROs with LMSRs. These LMSRs, coming out of

container ship conversion programs, dramatically improve transit times from homeport to potential trouble spots. With a sustained speed of 24 knots, the LMSRs can reach Saudi Arabia from Diego Garcia two days quicker than MPF ships based at the same location.[21] Their draft is similar to that of the MPF ships, but their 900(+)' length exceeds the longest MPF ship by nearly 100'.

The APA provides the warfighting CINC with a heavy armor brigade and critical theater-opening combat service support equipment and supplies. It delivers a potent heavy force early in a contingency, and facilitates the introduction and sustainment of follow-on forces. Roles listed in Army doctrine include augmenting an amphibious operation, occupying an advanced lodgment, establishing both offensive and defensive operations, establishing a sizable combat force to enable closure of additional forces, and providing a rapid peacetime response in support of military operations other than war.[22]

Comparing and Contrasting Today's Capabilities

The introduction of the LMSRs to the APA enables the Army program to beat Marine MPF ships to the Southwest Asian theater of operations. This does not set well with Marine desires to be the expeditionary force which arrives first and serves as an enabling force for introducing heavy follow-on forces. But when land prepositioning is factored into the equation, the two-day difference in ship arrival times becomes less significant.

Taking advantage of reduced requirements in the European theater, the Army has reorganized its war reserve assets and positioned one armored brigade set in Kuwait and is building a second brigade set together with a division base in Qatar.[23] Without the delay of ship sailing time, the land prepositioning capability is more responsive than either afloat prepositioning program in a Persian Gulf contingency.

On the other hand, the three-squadron organizational structure of MPF affords it true global reach, and multiple squadron positioning sites guarantee MPF first arrival to all but a few locations. Additionally, its ships are less constrained by port capabilities and harbor depths, and are therefore more expeditionary. Ship water-making and bulk petroleum storage capabilities, and organic ship-to-shore pipeline distribution are unique, further reinforcing MPF advantages in situations where host nation support is limited or nonexistent.

The most significant contrast between today's afloat prepositioning programs lies in the capabilities of the forces they deliver. The APA delivers a heavy armored force capable of offensive or defensive operations against an armored threat. Capable of sustained operations inland, the brigade can serve as a bridge between light early-entry forces and follow-on forces. In addition to introducing a heavy brigade early, the APA facilitates the introduction of major follow-on forces by providing port-opening and theater sustainment capabilities.

MPF, on the other hand, delivers a lighter, more expeditionary force. The MAGTF is a self-contained air/ground force whose capabilities focus on low to mid intensity conflicts and operations other than war. MPF is global in reach, and can operate independent of host nation infrastructure. However, its capabilities are littoral-based, and MPF forces are less capable of deep inland operations than their APA counterparts.

The following table compares major equipment items included within each program:

AFLOAT EQUIPMENT	MPS SQUADRON	APA	REMARKS
M1A1 TANKS	30(58)	123	*PLANNED INCREASE FOR EACH SET
LIGHT ARMORED VEHICLES	25 (4 WITH TOW)	0	
BRADLEY W/ TOW	0	126	
ARMORED PERSONNEL CARRIERS	0	100	
AMPHIB ASSAULT VEHICLES (AAV)	109	0	ADVANCED AAV UNDER DEVELOP.
HOWITZERS (155MM)	30 (TOWED)	24 (SP)	
MLRS	0	9	
ARMED HMMWV'S	129 (72 W/ TOW)	40	
AIR DEFENSE	8 HAWK/45 STINGER	20 STINGER TMS	
AIRCRAFT TO MARRY UP WITH	61 FIXED WING 63 ROTARY	0	
PERSONNEL TO MARRY UP WITH	16500	9800 INTERIM 19,900 PLANNED	
SUSTAINMENT	30 DAYS	15 DAYS WITH BRIGADE SET/30 DAYS FOR DIV WITH CORPS SPT PACKAGE	

TABLE 1-USMC MPSRON AND ARMY AFLOAT PREPO COMPARISON

THE EVOLUTION OF AFLOAT PREPOSITIONING IN THE NEAR TERM

Both the Army and the Marine Corps took away lessons from the Gulf War. For the Army, one of the lessons learned was that it needed to be able to get to the fight sooner. Specifically, the Army needed to make its heavy forces more expeditionary and capable of rapid strategic response. For the Marine Corps, it found its expeditionary forces lacked sufficient heavy firepower to go up against a significant armored threat without outside augmentation. These factors, taken together with the demise of the heavy threat posed by the Soviet Union, left the Army seeking to increase its expeditionary capabilities and its availability for low- and mid-intensity missions. At the same time, the Marine Corps wanted to ensure its expeditionary forces had the firepower and heavy capability needed to operate in mid- and higher-intensity conflicts. These considerations are reflected in the near-term enhancements of their respective afloat prepositioning programs.

Enhanced MPF (MPF(E))

Although not accepted by the Joint Staff as a substitute for prepositioning Army forces afloat, MPF(E) remained a priority requirement within the Marine Corps itself for a number of reasons. First, the Marines wanted to incorporate equipment that, due to space constraints, could not be included within the original 13 ships. These space limitations had been aggravated

over time by equipment modernization requirements that replaced original pieces of equipment with bulkier items. The Corps also wanted to include additional equipment to address lessons learned from previous operations when commander's employing MPF had to request equipment augmentation.

The biggest impetus behind MPF(E) was the Corps' desire to restore a full battalion complement of tanks aboard each MPSRON. After Desert Storm, only 30 M1A1 tanks per squadron were available to replace the 54 M60 tanks each squadron carried into Desert Storm. Restoration of a full tank battalion complement, or 58 M1A1 tanks per squadron, was considered critical. Like other modern equipment, the new tanks consumed considerably more ship space than the older M60's. However, the tank priority was such that the Marine Corps was prepared to remove other equipment from existing ships to make room if the additional ship per squadron was not forthcoming.[24]

Although top military leaders supported enhancing MPF, DoD budget requests did not include the program. However, Congress sided with the Marine Corps and, over the 1995-1997 period, appropriated funds to build or convert three ships for the enhancement program.

The three conversion RO/RO ships, expected to be delivered by the year 2000, will have similar speed and drafting characteristics as the ships currently in the program. Unlike current ships, the enhancement ships will be government-owned

rather than chartered. Besides addressing the tank issue, MPF(E) will expand current capabilities by adding a 5000 foot expeditionary airfield, equipment to support a Naval Mobile Construction Battalion, a 500 bed fleet hospital, additional equipment to support Joint Task Force (JTF) or Marine Forces Headquarters (MarForHQ), and additional sustainment.[25] With the additional equipment provided by MPF(E), the Marine Corps will enhance its capability to support an armor heavy, brigade-equivalent force.

The Expanded APA

As the Marine Corps pursues MPF(E), the Army is in the middle of a modernization and expansion of its APA that will ultimately produce a 16-ship fleet with a stowage capacity of five million square feet. The Army is presently replacing the seven RO/ROs borrowed from the RRF with five LMSRs. Currently, four conversion LMSRs are either on station or enroute, leaving just one RO/RO left to be replaced. A fifth conversion LMSR that was to complete the RO/RO phaseout was diverted to serve as a temporary replacement for an MPSRON-1 ship that was damaged in a grounding incident. In its place, the first of eight new-construction LMSRs will join the APA in September 1998 to complete the RO/RO phase-out.[26]

In the future, the conversion LMSRs themselves will be replaced with seven new-construction LMSRs, and the five

conversion LMSRs (four from APA and one from MPSRON-1) will revert to the RRF. Additionally, a second HLPS will join the APA, creating an end state fleet consisting of eight LMSRs, three LASHs, two container ships, two HLPSs, and a crane ship. The Army hopes to achieve this end state by 2000, although initial ship construction delays suggest this timeline may be extended.[27]

The focus of the expanded APA is on combat support and combat service support requirements necessary to support forces surging into theater from the continental United States. In addition to the heavy brigade set and port opening capabilities already afloat, the expanded APA will allow the Army to preposition a corps support base capable of providing theater-opening infrastructure. Included within this infrastructure are the sustainment and equipment capabilities necessary to meet the Army's early wartime executive agent responsibilities for line haul and common item support.

A wildcard in the Army's afloat prepositioning plans is the positioning of an eighth brigade set. In addition to the brigade set afloat, the Army presently has six brigade sets prepositioned on land; three in Europe, one in Kuwait, one in Qatar, and one in South Korea. Efforts to position the eighth set on land in southwest Asia have not met with success, and the Army is leaning toward establishing a second brigade afloat using a leased RO/RO.[28]

AFLOAT PREPOSITIONING IN THE 21ST CENTURY

While Army and Marine Corps near-term plans for their respective afloat prepositioning programs are relatively clear and on-track, the longer-term visions for both programs are only now beginning to emerge. For the Marine Corps, who not only lost their monopoly on afloat prepositioning of unit sets, but also will be strapped for the immediate future with ships of inferior speed, the need to advance the program to a new level seems particularly critical. Speaking to his Marines, General Krulack, the Commandant of the Marine Corps, said, "If you and I think we can continue to survive with the way [Marine Corps prepositioning] exists today, we're kidding ourselves."[29]

MPF 2010 and Beyond

Responding to the Commandant's call, the Marine Corps Combat Development Center (MCCDC) recently published a concept paper entitled "Maritime Prepositioning Force 2010 and Beyond." In this paper, the MPF of the future would be founded upon four pillars. The first, force closure, would provide for at-sea arrival and assembly of the maritime prepositioning force, thus eliminating the present requirement for access to secure ports and airfields. Forces would marry-up with platforms while they were enroute. Units would be billeted on-board, and through selective reconfiguration of tactical loads, elements of the

force would arrive in the objective area already prepared for operations.

The second pillar of MPF 2010 is amphibious task force (ATF) integration. This envisioned capability would allow MPF to reinforce the assault echelon of an amphibious task force through selective offload capabilities, advanced facilities for tactical employment of assault support aircraft, amphibious vehicles, and ship lighterage. While lacking a true forcible entry capability, the MPF would be more capable than today of reinforcing the striking power of an ATF.

The third pillar of MPF 2010 is a capability to provide indefinite sustainment by serving as a sea-based conduit for logistics support. This would support the Corps' efforts to employ operational maneuver from the sea, where forces maneuver directly from sea-based platforms to operational objectives without having to secure beachheads and build logistics capabilities ashore.

The final pillar of MPF 2010 is a capability to conduct in-theater reconstitution and redeployment without a requirement for extensive materiel maintenance at a strategic sustainment base. The MPF of the future would be capable of performing one mission after another in rapid succession by being capable of reconstitution while redeploying to a new area of operation.

Realization of MPF 2010 will require significant ship capability increases, particularly in the areas of personnel

accommodations, aviation receiving, selective equipment and cargo retrieval, and onboard maintenance facilities. Not surprisingly, design requirements also call for a sustained speed of at least 25 knots, one knot greater than the LMSRs currently being fielded to the Army program.[30]

With MPF 2010, the Marine Corps is seeking to transform afloat prepositioning from essentially a strategic mobility enhancement tool into a platform from which forces may be directly employed and sustained. As it does so, it is emphasizing that the future capability will augment, but not replace, the requirement for amphibious assault ships. The Marine Corps' problem in the future may be that the closer they come to the vision of MPF 2010, the more blurred the distinction becomes between MPF capabilities and those of the amphibious assault fleet. The Marine Corps does not wish to jeopardize the future of amphibious assault shipping through its efforts to enhance MPF capabilities.

APA and the Future Army

While a number of force projection enhancements are under review, a long-range vision for the Army's afloat prepositioning "after next" has yet to be formally published.[31] The Army has a number of enhancements it could choose to pursue. One direction might be to expand afloat prepositioning to include multiple squadrons located in different parts of the world, something akin

to the three MPSRONs. However, afloat prepositioning is an expensive proposition. There is a point where enough is reached, and every ship tied up with prepositioning missions detracts from the total capacity of surge sealift.

The Army may instead attempt to focus efforts toward improving the speed and responsiveness of strategic sealift. Technologies such as high capacity air cushioned transport and ships capable of 80-knot speeds would provide a worldwide force projection improvement for United States-based Army forces.

Following a direction similar to the Marine Corps' "MPF 2010 and Beyond" might be one course not available to the Army without a dramatic change in fundamental Service roles and functions. "MPF 2010 and Beyond" brings a direct amphibious employment character to afloat prepositioning. It is unlikely that Army futurists would wish, or be allowed, to follow a path that would likely infringe upon a principle function of another service (i.e. amphibious operations).

Another Possibility?

One of the more intriguing futuristic concepts being explored today is the idea of a transportable "floating island." Termed the mobile offshore base (MOB), this concept centers around self-propelled modules that could be linked together to create up to a mile-long, 500 foot wide island. The MOB system could provide offshore airfields capable of handling strategic aircraft such as

the Air Force C-17. It would have vast storage capability and serve as a multi-ship docking platform for sustained operations. Requirements for port and airfield access would be eliminated. While such a concept stretches the imagination, the capability is close at hand. In fact, making such a capability militarily useful was included as a recommendation in the recently published report of the National Defense Panel.[32]

AFLOAT PREPOSITIONING'S STRATEGIC ROLE-NOW AND IN THE FUTURE

Given current program capabilities, short- and long-term enhancement plans, and a number of alternative options, the challenge for military leaders is to identify the right formula that will provide the nation the full spectrum capabilities it needs today and into the future. The diminishing size of the nation's military and the significant reduction in basing overseas suggest that equipment prepositioning will only grow in importance in the future. Arriving at the proper mix of land prepositioning, afloat prepositioning, and strategic air- and sealift will likely become more critical to the national security goals of the nation as it enters an uncertain future with a smaller military based primarily within the continental United States.

The key to maintaining full spectrum capabilities in the future may lie in the purposeful development of divergent capabilities that are closely linked through doctrine and planning. In the case of Army and Marine equipment prepositioning programs, linkages might include an integrated employment doctrine and a clear delineation in principal warfighting focus between the different programs. Planning integration might also include a plan to "leapfrog" technological advancements in a manner that allows one program to consolidate on a fielded technology while the other develops the next.

Full spectrum capability in the resource-constrained future will not be achieved by developing multiple versions of multipurpose programs and forces, but by the careful and conscious integration of complementary but divergent capabilities based upon the fundamental differences between the roles and functions of the Services.

CONCLUSIONS AND RECOMMENDATIONS

As the Army and Marine Corps develop the future of their respective afloat prepositioning programs, they should focus on the basic differences in their Service roles and functions. Each Service must develop their respective program to be complementary of the other, as well as to land prepositioning programs and other emerging force projection capabilities.

To the degree the two programs compete with each other by trying to incorporate all the capabilities of the other plus some, questions of overlap and redundancy will continue. And to the extent each program tries to be all things to all people, the complementary roles and functions of the parent Services stand to be compromised.

As the "iron fist" of American diplomacy, the Army should focus on ensuring its afloat prepositioning program is always able to deliver the heavy armored punch for which it was designed. To that end, it should de-emphasize the APA's role in humanitarian and low intensity conflict missions. Committing APA to such missions risks piecemealing the force and leaving it unable to deliver its unique heavy offensive capability.

For the Marine Corps, the future lies in transforming afloat prepositioning into a force employment tool. Eliminating the requirement for a benign port and airfield will be a quantum leap forward for afloat prepositioning operations. The basic pillars of MPF 2010 should be pursued even at the risk of blurring the distinctions between afloat prepositioning and amphibious assault operations. The Marine Corps should show patience and allow ship technologies to mature enough to support all four pillars of MPF 2010. Particular emphasis should be placed on developing the warfighting potential of MOBs, which appear to offer an outstanding opportunity to augment vice replace the capabilities presently found in the amphibious fleet.

Attaining full spectrum capabilities in the strategic environment of the future will require a level of jointness that does not end with simply fighting the forces together. With diminishing force structure and resources, full spectrum capability will require designing the forces and programs together in a manner which achieves divergent, but complementary capabilities. Afloat prepositioning offers the Army and Marine Corps a present day opportunity to begin the process.

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ENDNOTES

[1] Chairman of the Joint Chiefs of Staff, National Military Strategy of the United States of America-1997 (Washington, D.C.: U.S. Chairman of the Joint Chiefs of Staff, September 1997), 21.

[2] General Accounting Office, Afloat Prepositioning: Not All Equipment Meets Army's Readiness Goal (Washington, D.C.: U.S. General Accounting Office, July 1997), 1.

[3] Karsten Engelmann, "Pre-Positioning Attack Helicopters Afloat," Military Review, May-June 1996, 79.

[4] Ernest S. Jones, "MPS and Desert Storm," Marine Corps Gazette, August 1991, 48.

[5] David B. Brown and David G. Henderson, "Maritime Prepositioning: A Powerful Presence in the 21st Century," Amphibious Warfare Review, Summer/Fall 1993, 12.

[6] "U.S. Navy in Desert Shield/Desert Storm-IV: "Beans, Bandages and Bullets"-Logistics Operations,"; available from <http://www.history.navy.mil/wars/dstorm/ds4.htm>; Internet; accessed 15 December 1997.

[7] "U.S. Navy in Desert Shield/Desert Storm-II: "The Gathering Storm"-The Build-up of U.S. Forces,"; available from <http://www.history.navy.mil/wars/dstorm/ds2.htm>; Internet; accessed 15 December 1997.

[8] Congressional Budget Office, Moving U.S. Forces: Options for Strategic Mobility (Washington, D.C.: U.S. Congressional Budget Office, February 1997), 33.

[9] Jones, 48.

[10] Joint Chiefs of Staff, Mobility Requirements Study (Volume I) (Washington, D.C.: U.S. Joint Chiefs of Staff, 23 January 1992), ES-5.

[11] Department of the Army, Army Pre-Positioned Afloat Operations, Field Manual 100-17-1 (Washington, D.C.: U.S. Department of the Army, 27 July 1996), 1-2.

[12] Kyle J. Adrian et al., "Prepo Afloat: An Execution Challenge,"; available from <http://lee-dns1.army.mil/quartermaster/bulletin/prepo.html>; Internet;

accessed 1 December 1997.

[13] David B. Brown and David G. Henderson, "Maritime Prepositioning: A Powerful Presence in the 21st Century," Amphibious Warfare Review, Summer/Fall 1993, 15.

[14] Department of the Army, Army Prepositioned Afloat Operations, iv.

[15] Congressional Budget Office, Moving U.S. Forces: Options for Strategic Mobility, 41-42.

[16] Department of the Navy-Headquarters United States Marine Corps, Marine Air-Ground Task Force: A Global Capability, Fleet Marine Force Reference Publication 2-12 (Washington, D.C.: U.S. Department of the Navy-Headquarters United States Marine Corps, 10 April 1991), 25.

[17] Department of the Navy-Headquarters United States Marine Corps, Maritime Prepositioning Force Operations, Naval Warfare Publication 22-10 and Fleet Marine Force Manual 1-5 (Washington, D.C.: U.S. Department of the Navy, September 1993), 1-1.

[18] John H. Kern, Office of the Deputy Chief of Staff, Logistics, U.S. Army Headquarters, telephone interview by author, 18 February 1998.

[19] "Army War Reserve "-3 & -5"," 20 August 1997; available from <http://call.army.mil/call/newsltrs/97-7/rsochp4.htm>; Internet; accessed 15 December 1997.

[20] Department of the Army, Army Prepositioned Afloat Operations, 1-3.

[21] Jon R. Anderson, "Is Army Replacing the Corps as 'Quick Response' Force?" Navy Times, 7 October 1996, 10.

[22] Department of the Army, Army Prepositioned Afloat Operations, 1-2.

[23] Anderson, "Is Army Replacing the Corps as 'Quick Response' Force?", 10.

[24] Department of Defense Inspector General, The U.S. Marine Corps Maritime Prepositioning Force Enhancement Program (Arlington, VA.: DoD Inspector General Report No. 96-009, 17 October 1995), 9.

[25] Ibid., 5.

[26] John H. Kern, telephone interview by author, 18 February 1998.

[27] General Accounting Office, Late Deliveries of Large, Medium Speed Roll-On/Roll-Off Ships (Washington, D.C.: U.S. General Accounting Office, June 1997), 6.

[28] John H. Kern, telephone interview by author, 18 February 1998.

[29] Anderson, "Is Army Replacing the Corps as 'Quick Response' Force?", 10.

[30] LtCol Frank Quinlin of Headquarters, U.S. Marine Corps, interview by author, January 1998, Washington, D.C.

[31] John H. Kern, telephone interview by author, 18 February 1998.

[32] National Defense Panel, Transforming Defense: National Security in the 21st Century (Arlington, VA.: National Defense Panel, December 1997), 47.

BIBLIOGRAPHY

Adrian, Kyle J., Robert Grundy, Osvaldo Malave, Marvin M. Thornton Jr., John M. Weaver, and Eric L. Whitehurst. "Prepo Afloat: An Execution Challenge." Available from <http://lee-dns1.army.mil/quartermaster/bulletin/prepo.html>. Internet. Accessed 1 December 1997.

Anderson, Jon R. "Is Army Replacing the Corps as 'Quick Response' Force?" Navy Times, 7 October 1996, p. 10.

_____. "Right Way vs. Wrong Way: DoD: Army Should Adopt Corps' Prepositioning Plan." Navy Times, 17 February 1997, p. 28.

"Army War Reserve "-3 & -5"." 20 August 1997. Available from <http://call.army.mil/call/newsltrs/97-7/rsochp4.htm>. Internet. Accessed 15 December 1997.

"Army War Reserve 3 Force." Available from <http://www.msc.navy.mil/pm3/awr3f.htm>. Internet. Accessed 18 November 1997.

Brown, David B., and David G. Henderson. "Maritime Prepositioning: A Powerful Presence in the 21st Century." Amphibious Warfare Review (Summer/Fall 1993): 11-18.

Cohen, William S. Annual Report to the President and the Congress. Report presented to the President and Congress in accordance with Section 113(c) and Title 10 of the U.S. Code and Section 405 of the DoD Reorganization Act of 1986: U.S. Department of Defense, April 1997.

_____. Report of the Quadrennial Defense Review. Report prepared in accordance with the Military Force Structure Review Act, which was included as part of the National Defense Authorization Act for Fiscal Year 1997: U.S. Department of Defense, May 1997.

Commission on Roles and Missions of the Armed Forces. Directions for Defense. Report presented to the Chairman of the Senate Armed Services Committee, Chairman of the House National Security Committee, the Secretary of Defense, and the Chairman of the Joint Chiefs of Staff in accordance with Section 954(b) of the National Defense Authorization Act for Fiscal Year 1994: U.S. Department of Defense, 1995.

"DEF-21 Preposition Army Forces on Land Rather than Afloat." Available from

<http://www.dean.usma.edu/socs/ap/ss202/DEF21.HTM>. Internet. Accessed 15 December 1997.

Department of Defense Inspector General. Equipment Pre-positioned Afloat. Arlington, VA.: DoD Inspector General Report No. 97-054, 20 December 1996.

Department of Defense Inspector General. The U.S. Marine Corps Maritime Prepositioning Force Enhancement Program. Arlington, VA.: DoD Inspector General Report No. 96-009, 17 October 1995.

Engelmann, Karsten. "Pre-Positioning Attack Helicopters Afloat." Military Review, May-June 1996, 79-83.

Institute for Defense Analysis. Evolving Service Roles in Presence Missions. Alexandria, VA.: Institute for Defense Analysis, January 1995.

Jones, Ernest S. "MPS and Desert Storm." Marine Corps Gazette, August 1991, 47-50.

Kern, John H. <KERNJH@hqda.army.mil>. "APS Army Regulation." Electronic mail message to Mike Cole <colem@carlisle-emh2.army.mil>. 12 August 1997.

_____. <KERNJH@hqda.army.mil>. "Eighth Brigade Set." Electronic mail message to Mike Cole <colem@carlisle-emh2.army.mil>. 26 September 1997.

_____, Office of the Deputy Chief of Staff, Logistics, U.S. Army Headquarters. Telephone interview by author, 18 February 1998.

Kross, Walter. Posture Statement: U.S. Transportation Command. Posture Statement presented to the 105th Cong. Washington, D.C.: U.S. Transportation Command, March 1997.

"Maritime Prepositioning Force 2010 and Beyond: A Concept for the Conduct of Maritime Prepositioning Operation in the 21st Century." Available from <http://ismo-www1.mqg.usmc.mil/concepts/mpf.htm>. Internet. Accessed 18 November 1997.

Metzinger, Erin M. "Prepositioning as a Joint Undertaking: Military Sealift Command's Afloat Prepositioning Force." Marine Corps Gazette, August 1997, 12-14.

Military Sealift Command Homepage. "PM3-Prepositioning." Available from <http://www.msc.navy.mil/pm3/ops.htm>. Internet. Accessed 18 November 1997.

National Defense Panel. Transforming Defense: National Security in the 21st Century. Arlington, VA.: National Defense Panel, December 1997.

National Security Industrial Association. Maritime Prepositioning Force Replacement Study. National Security Industrial Association, January 1996.

"Navy Fleet Gains 9, Loses 11." Navy Times, 5 January 1998, p.40.

Nolan, Mary I. "MSC Awards Contract for First MPF(E) Ship." Sea Power, April 1997, 95-96.

_____. "MSC Awards Contract for Second MPF(E) Ship." Sea Power, May 1997, 31-32.

Patterson, Kristin. "History in the Making: Army Takes to the Sea." Army Times, 3 March 1997, 19.

Phelps, Angela R. "Strategic Mobility." Available from <http://www.almc.army.mil/orgnzatn/alog/mayjun/ms042.htm>. Internet. Accessed 15 December 1997.

Quast, Philip M. "Readiness...Has Never Been Better: Interview with MSC Commander Vice Adm. Philip M. Quast." Interview by James D. Hessman, Mary I. Nolan, and Emeritus L. Edgar Prina. Sea Power, March 1997, 7-11.

Quinlin, Frank, MPF Officer within the Deputy Chief of Staff for Plans, Programs, and Operations Division, Headquarters, U.S. Marine Corps. Interview by author, January 1998, Arlington VA.

Rosas, Sylvia. "Military Sealift Command and Marine Corps MPS, A Partnership Forward...From the Sea." Marine Corps Gazette, March 1996, 23-26.

"Ship Introduction-PM 4: Strategic Sealift." Available from <http://www.msc.navy.mil/PM4/stratsea-mpfe.htm>. Internet. Accessed 18 November 1997

"Strategic Sealift." Available from <http://ustcweb.safb.af.mil/missions/mscfact5.html>. Internet. Accessed 18 November 1997.

The White House. A National Security Strategy for a New Century. Washington, D.C.: The White House, May 1997.

U.S. Chairman of the Joint Chiefs of Staff. National Military Strategy of the United States of America-1997. Washington,

D.C.: U.S. Chairman of the Joint Chiefs of Staff, September 1997.

U.S. Congressional Budget Office. Moving U.S. Forces: Options for Strategic Mobility. Washington, D.C.: U.S. Congressional Budget Office, February 1997.

U.S. Defense Science Board. Report of the 1996 Defense Science Board Task Force on Strategic Mobility. Washington, D.C.: U.S. Defense Science Board, August 1996.

U.S. Department of the Army. Army Prepositioned Afloat Operations. Field Manual 100-17-1. Washington, D.C.: U.S. Department of the Army, 27 July 1996.

U.S. Department of the Navy. Maritime Prepositioning Force Operations. Naval Warfare Publication 22-10 and Fleet Marine Force Manual 1-5. Washington, D.C.: U.S. Department of the Navy, September 1993.

U.S. Department of the Navy-Headquarters United States Marine Corps. Marine Air-Ground Task Force: A Global Capability. Fleet Marine Force Reference Publication (FMFRP) 2-12. Washington, D.C.: U.S. Department of the Navy-Headquarters United States Marine Corps, 10 April 1991.

U.S. Department of the Navy-Headquarters United States Marine Corps. United States Marine Corps Master Plan for the 21st Century. MCMP. Washington, D.C.: U.S. Department of the Navy-Headquarters United States Marine Corps, 8 October 1997.

U.S. General Accounting Office. Late Deliveries of Large, Medium Speed Roll-On/Roll-Off Ships. Washington, D.C.: U.S. General Accounting Office, June 1997.

U.S. General Accounting Office. Overseas Presence: More Data and Analysis Needed to Determine Whether Cost-Effective Alternatives Exist. Washington, D.C.: U.S. General Accounting Office, 3 June 1997.

U.S. General Accounting Office. Afloat Prepositioning: Not All Equipment Meets Army's Readiness Goal. Washington, D.C.: U.S. General Accounting Office, July 1997.

U.S. Joint Chiefs of Staff. Mobility Requirements Study (Volume I). Washington, D.C.: U.S. Joint Chiefs of Staff, 23 January 1992.

U.S. Joint Chiefs of Staff. Mobility Requirements Study Bottom-Up Review Update. Washington, D.C.: U.S. Joint Chiefs of Staff, 28 March 1995.

"U.S. Navy in Desert Shield/Desert Storm-II: "The Gathering Storm"-The Build-up of U.S. Forces." Available from <http://www.history.navy.mil/wars/dstorm/ds2.htm>. Internet. Accessed 15 December 1997.

"U.S. Navy in Desert Shield/Desert Storm-IV: "Beans, Bandages and Bullets"-Logistics Operations." Available from <http://www.history.navy.mil/wars/dstorm/ds4.htm>. Internet. Accessed 15 December 1997.

"Welcome Aboard the USNS Shughart." Available from <http://www.bayship.com/shughart.html>. Internet. Accessed 9 February 1998.

West, Togo D. Jr., and Dennis J. Reimer. A Statement on the Posture of the United States Army, Fiscal Year 1998. Posture Statement presented to the 105th Cong., 1st sess. Washington, D.C.: U.S. Department of the Army, 1997.

Wilson, Jim. "City at Sea." Popular Mechanics, February 1998, 69-73.

Winnefeld, James A. Overseas Presence: An Old Mission and a Current Roles and Missions Issue: Why Not a Future Program? Santa Monica, CA.: Rand, 1995.

Wisniewski, Paul D. "Dueling Prepo: Do New Army Prepositioning Ships Duplicate the Marine Corps?" Armed Forces Journal International (September 1994): 22-24.