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Current doctrine for the US Armed Forces seeks quick and decisive military victories through the rapid deployment, force closure, and employment with overwhelming tempo and firepower. But due to fiscal limitations and transportation challenges borne out of peacetime budgets, the Marine Corps war reserve system cannot maintain uninterrupted operational sustainment in the magnitude of a major theater war. It is imperative, when operating at the level of the Marine Expeditionary Force, that Marine and Joint Force commanders understand this gap as well as the measures that can be taken to mitigate the inherent risk associated. Additionally, for the Joint Force Commander, it is important to understand the latency of the overall problem. Issues placing constraints on one service are usually transferable and being experienced by all service components in the realm of logistics commonality.

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Overcoming the Sustainment Gap in the Marine Corps War Reserve System

By

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Major, U.S. Marine Corps

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: ___///ORIGINAL SIGNED///___

9 February 2004

ABSTRACT

Current doctrine for the US Armed Forces seeks quick and decisive military victories through the rapid deployment, force closure, and employment with overwhelming tempo and firepower. These terms are echoed throughout service and joint publications on campaigning and the conduct of operations. But due to fiscal and transportation limitations and challenges borne out of peacetime budgets, the Marine Corps war reserve system cannot maintain uninterrupted operational sustainment in the magnitude of a major theater war.

When a Marine Expeditionary Force (MEF) is deployed, the largest of the scalable Marine Air Ground Task Forces (MAGTF), an operational logistics gap is pulled open between the time force-held and prepositioned stocks are exhausted and the time it takes to prepare and deliver the War Material Reserve (WMR) to theater.

It is imperative, when operating at levels above the Marine Expeditionary Brigade (MEB), that Marine and Joint Force commanders understand this gap as well as the measures that can be taken to mitigate the inherent risk associated. Additionally, for the Joint Force Commander, it is important to understand the latency of the overall problem. Issues placing constraints on one service are usually transferable and being experienced by all service components in the realm of logistics commonality.

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DYNAMICS OF MODERN FORCE EMPLOYMENT

Recent history shows that the preferred application of U.S. military power in a major crisis is through rapid deployment, overwhelming tempo, and unbearable force[1]. This speed and tempo creates a strategic surprise by acting before the enemy can effectively react; overwhelming his decision process and ultimately paralyzing his ability to command and control at the strategic and operational level. The goal is a quick and decisive military victory with losses minimized through the avoidance of a protracted high intensity conflict.

This fast-paced environment generated by U.S. forces is a monster in itself as it requires that all systems internal to the effort be able to sustain the momentum in order to constitute an effective and credible force as a whole. This method of operation is highly dependent on synchronization. If a single contributing system can not keep pace then the entire campaign is at risk of collapse and the initiative being ceded to the enemy. In light of this, the greatest tangible weakness in the U.S. Armed Forces, for a myriad of reasons, has historically been logistics.

For the US Marine Corps, an expeditionary culture has lead to a responsive and adaptive system for logistics at the brigade level and below. However, when responding to a crisis at the major theater level, logistics is a weakness that surfaces immediately upon deployment.

LOGISTICS—THE CRITICAL WEAKNESS

The construct of Marine Air Ground Task Force (MAGTF) deployment through a flexible combination of forward deployed amphibious units, Maritime Preposition

[1] JP 3-0, Doctrine for Joint Operations and MCDP 1, Warfighting.

Squadrons (MPSRONs) and follow-on-echelons has been proven as the fastest way to generate a scaleable and credible force almost anywhere in the world. Couple this with maneuver warfare doctrine and the "force-closure to objective-achieved" timeline is incredibly compressed—dovetailing neatly in the rapid deployment spectrum previously discussed. The only deficiency in the equation is the lack of responsiveness in operational sustainment when operating at the Marine Expeditionary Force (MEF) level.

Under the current construct, a Marine Expeditionary Brigade (MEB), drawing its materiel support from an associated MPSRON, can deploy and operate independently up to 30 days[2] with only minor additional support to round out sustainment requirements. After this point, resupply is provided through a mature theater demand-based system, the U.S. Navy logistics channels, or a combination of the two. This design bodes well in the environment of small scale contingencies and minor operations. But at the level of major theater operations where the MEF is most likely to be employed, the MPSRON prepositioned materiel is only a small piece of the entire requirement by virtue of the significant increase in force size.

While MAGTFs are task organized for each specific mission, a notional "heavy" MEB consists of approximately 16,500 Marines and Sailors whereas a notional MEF will consist of approximately 60,000 personnel or more depending upon the mission.[3] By design, the remaining requirement to support the difference in tens-of-thousands of forces is met through preprogrammed requirements in the Marine Corps war reserve system. This system, directed by Headquarters Marine Corps (HQMC) and managed by the Marine Corps Logistics Command (LOGCOM), provides sustaining material through a

[2] MCO P3000.18, Marine Corps Planner's Manual.
[3] NWP 22-10/FMFM 1-5, Maritime Prepositioning Force Operations.

crisis plan designed to support all standing geographic combatant commander operational plans (OPLANs), contingency plans (CONPLANs) or other crisis actions. Ideally, prepositioned materials provide initial sustainment to open a theater with the remaining material provided through the war reserve system until the theater matures to a demand based resupply after 60 days. But executing the war reserve system takes time, coupling this with the speed of modern operations and a gap exists in the ability to close sustainment on the force prior to exhausting the initial prepositioned and force-held materials. The bottom line is that until a significant change is made in the Marine Corps War Reserve system a MEF commander in a crisis must depend upon the material he physically holds upon force closure to see him through the completion of major combat. It is the purpose of this paper to discuss the weaknesses in the current system, highlight the physical and fiscal challenges, and propose practical measures for the operational commander to mitigate the impact of logistical velocity on the construct of operations.

MARINE CORPS WAR RESERVE SYSTEM

Current Marine Corps logistics support doctrine provides adequate but austere support through the War Material Reserve (WMR). The WMR is physically composed of specific material items and quantities deemed necessary to conduct combat operations from all classes of supply[4] less aviation material. Aviation repair parts, ordnance, and material systems are managed by the Department of the Navy through the Operational Navy Headquarters (OPNAV). The WMR in its entirety is a combination of force-held

[4] See Appendix A, Classes of Supply table.

supplies, prepositioned materiel, wholesale stores, and planned purchases from industry broken down in three primary categories and sub-categories as follows[5]:

1. Peacetime Force Material Requirement (PFMR):
   Material required to meet daily operational requirements of Marine Corps forces and the supporting establishment.

2. War Reserve Material Requirement (WRMR):
   Material necessary to sustain MAGTFs for distinct time periods based on given employment scenarios beginning on D-day. WRMR is subdivided into:
   a. War Reserve Material Stocks Force-Held (WRMSF) – held by the Marine Expeditionary Force (MEF) commander for crisis use only.
   b. Prepositioned Stocks (MPSRON and Norway) – Individual brigade sets held aboard three MPRONs and one brigade set warehoused forward in Norway.
   c. War Reserve Material Stocks In-Stores (WRMSI) – held and managed by the Marine Logistics Command (LOGCOM) for crisis use.

3. Industrial Base Material Requirement (IBMR):
   Requirements that are deemed unnecessary for immediate utility and are therefore filled by requisitions after an operation commences.

Ideally, in response to a crisis, a MEF's immediate war reserve sustainment will be formed from a combination of the force-held stocks it deploys with (PFMR and WRMSF) and the prepositioned stocks that it assumes once in theater. This remaining sustainment requirement will be met through shipment of the material programmed by LOGCOM from the in-stores stocks (WRMSI). Additional and future requirements will be immediately sourced through the Defense Logistics Agency (DLA) or contracted from industry by LOGCOM. The problem flowing from this point is two-fold; the Marine Corps can historically count on being fiscally constrained in peacetime and transportation-limited during war. The greater issue is that current Marine Corps war reserve policy as established by the service headquarters does not adequately incorporate these two assumptions into its design. To overcome this difficulty the operational

[5] MCO P4400.39H, War Reserve Material Policy Manual, pg 1-6 to 1-7.

commander must understand how to best manage available resources as well as incorporate other assets and means into the sustainment plan.

IMPACT OF FISCAL CONSTRAINTS ON THE WMR

Due to fiscal limitations, MEF commanders have reduced their WRMSF requirements from the required target of 60 Days of Supply (DOS)[6] to zero except for Class II and IX, which are to be maintained at 30 DOS. This reduction in force-held stocks is a significant departure from the target and is directly due to the financial inability of MEF commanders to maintain both the required "shelved" material and normal operating stocks under peacetime budget constraints.[7] The reduction of WRMSF at the MEF is mutually agreed between Headquarters Marine Corps, LOGCOM, and all three Marine Expeditionary Forces. The result of this decision shifts the balance of war reserve material to LOGCOM where it is now managed as in-stores stocks (WRMSI).

The second order to the fiscal problem is now experienced by LOGCOM. As stated, the material requirements not met by the MEF are incorporated into an expanded WRMSI requirement. Fiscal realities force LOGCOM to further coordinate with the service headquarters to determine reduced stocking goals within the budgetary realities of peacetime operations. The difference between the hard material requirement and the fiscal reality is appropriately labeled as WMR "shortfall".

The risk generated by material shortfalls is mitigated at the service level through negotiations and agreements with Department of Defense (DOD) Agencies such as the Defense Logistics Agency (DLA), other services acting as executive agents, Integrated

[6] Ibid.
[7] From personal interview of MGySgt Jeffrey A. Bannar, MARCENT G4 Sustainment Chief during Operation Iraqi Freedom.

Material Managers (IMM), or contractual agreements with industry. These agreements, however binding, are unfunded promises for limited materials in a competitive environment. Should the Marine Corps require employment of its war reserve, these shortfalls are to be filled by these external agencies through emergency funding measures. However, the common requirements between all of the services places the Marine Corps in direct competition with the other three services and governmental departments and agencies as well as civilian sector commitments from industry. Required material may not physically exist or may not be in production at an acceptable rate upon execution of the war reserve.

Finally, further exacerbating the problem, the MEF may not have adequate funding to maintain complete stocks in the reduced 30 day requirement of Class II and IX as WRMSF. These force-held shortfalls are unregistered in the system and are not visible to LOGCOM, where other shortfalls are requisitioned and contracted upon activation of the war reserve withdrawal.

The end result of the fiscal impact is that the majority of the WMR is held on a balance sheet outside of the MEF, where it is subject to fiscal constraints of peacetime purchasing power and priorities. Reality dictates that shortfalls are unavoidable and must be mitigated through an additive process of industrial crisis management, all at the expense of critical time.

CHALLENGES IN MAKING DELIVERY

The final tier to this problem is the speed of delivery. With the speed of operations seeking quick and decisive military victories, transportation is limited. Military transportation is allocated through Time Phased Force Deployment Data (TPFDD) to

prioritize and synchronize all material, equipment, and forces being delivered from their home station/point of origin to their final destination for employment. Initially, material must be aggregated for movement from its point of embarkation (POE). Force-held and prepositioned material is easily defined and moved through the TPFDD process as it is fairly centralized and already controlled by the deploying MEF commander. Unfortunately, due to fiscal limitations and resulting stocking deviations previously discussed, force-held and prepositioned stocks are insubstantial to sustain a MEF. The expanded in-stores requirements and the generated material shortfalls at LOGCOM are the bulk of the sustainment; the identification and movement of which creates issues in themselves.

The TPFDD accounts for the movement of the entire War Material Reserve and is preprogrammed in all US theater OPLANs and appropriate concept plans (CONPLAN w/ TPFDD). The assumption is that all material will be identified and packed as preprogrammed in the data base, to which the combatant commander is allocating air and sealift. Unfortunately, with material shortfalls and wholesale requirements to turn over shelf-life limited stocks, LOGCOM cannot guarantee that the packaging of material at any given time will match the programmed database. Different quantities of in-stores stocks are available at different sites daily. Of more significance, the accepted shortfall materials that are to be provided through other agencies or the industrial base and may not be available in the allotted time. Consider the following hypothetical example:

The TPFDD for a given plan may call for the delivery of 50 standard twenty-foot containers of packaged hydraulic fluid, originating at Marine Corps Logistics Base (MCLB) Barstow, CA and scheduled to be delivered in synchronization with the

deployment of the armored vehicles and artillery pieces of a mechanized force. LOGCOM may only have half of the requirement actually on hand at Barstow due to stock rotation, expiration, contamination, etc. The remainder of the requirement could be spread across the nation with 5 containers at MCLB Albany, GA; 10 may be at Blount Island, FL as excess from MPF stock rotation; and the final 10 containers recorded as shortfalls and placed on order through DLA. In prosecution of the TPFDD, this material has a given window to be assembled, packaged, and delivered to the port of embarkation in order to make military shipment. The programmed timeline in the TPFDD is from MCLB Barstow to the Port of San Diego, CA to be loaded on military sealift. Some of these containers of hydraulic fluid may make it to the port for delivery but the remainder will have to be rescheduled once available. Between the competition for lift and the need to maintain synchronization through deployment, the remaining material must be reevaluated for delivery. The mechanized force will arrive in theater with less than their requirement for hydraulic fluid and no known date for the delivery of the remaining requirement.

While this hypothetical example may be abstract or oversimplified, it does underscore several significant problems with delivery of material. Unless the material requirements are physically purchased and maintained at the planned point of origin, the ability to make delivery within the timeline is at extreme risk. Shortfalls stored elsewhere due to stock rotation or purchase cycles insert an unprogrammed transportation requirement into the TPFDD. Complicit with the fiscal problem, the shortfalls not met through military stocks fall on the industrial base. Now a manufacturer must first provide/fabricate the item, adding an additional lead time prior to entering the shipping process.

Items with common civilian demand (such as 30 wt. motor oil) are usually fairly available since the private sector market creates enough business to support commercial stocks as well as maintain an open production line. As long as there are not limitations from existing private contracts, delivery can be effected with a minimal increase to overall transportation time. If the requirement is a military unique item, (such as atropine/2-pam chloride injectors for individual protection in a chemical environment) industrial responsiveness is limited. Production lines are only established for manufacturing runs as funded. A manufacturer, even if already under contract for the item, may have to halt current production on a given line, retool the line for fabrication of the contracted item required for WMR, and then begin the fabrication process. The time to achieve this can be further extended if special skills are required by technicians or laborers in the manufacturing process or if the current production line is under binding contract and retooling cannot begin until prior legal obligations are met with the current customer.

Summarizing the delivery issue, in-stores stocks and registered shortfalls have no tangible means of being managed in crisis force projection. The time to locate, gather, pack, and deliver does not support seamless integration with force-held and prepositioned stocks. The velocity of service level logistics (or lack of), even if funded, creates an immediate wrinkle in the transportation system. The end result is that the physical movement of material now has an unpredictable and unprogrammable initial transportation delay that immediately delinks the material from the TPFDD, while the forces requiring the material are already moving and being employed.

MEASURING PERFORMANCE

One of the burdens of a system such as the Marine Corps war reserve system is the ability to test and evaluate the program through simulation in order to qualify procedures and identify deficiencies for correction. To date, the only employment for training with the WMR is with the United States Pacific Command (USPACOM) OPLAN exercises. Unfortunately, training is conducted from the service component headquarters down to the MEF using a notional TPFDD. The only portion of the WMR process validated during these exercises is the method and timing for requesting material release from LOGCOM through Headquarters Marine Corps. This is performed via notional message traffic, never actually leaving the joint exercise team, the relative value of which is limited to an operational awareness at the Marine Component staff. Actual delivery of material is assumed in conjunction with the TPFDD schedule. Without the inclusion of LOGCOM and Installations and Logistics representatives from Headquarters Marine Corps, the inability to match a TPFDD listing with actual material had never been discovered until the physical deployment in support of OPERATION IRAQI FREEDOM (OIF).

While not wanting to tailor a system to meet a specific crisis, OIF is an excellent backdrop to explore the execution of the war reserve. OPERATION DESERT SHIELD/DESERT STORM (DS/DS), also supported through the war reserve process some 12 years ago, can be excluded due to the substantial changes in the speed of force deployment and commitment of forces to combat as well as material availability and stocking policies at the time. Marine forces in DS/DS deployed and built sustainment over the course of some five months before conducting ground combat operations short

of 80 km in just over four days.[8] Comparatively, in OIF the MEF had just short of two months to deploy and prepare sustainment in theater before conducting combat operations beyond 800 km over 17 days[9] under a policy of reduced capital investment in materiel.

OPERATION IRAQI FREEDOM-SO HOW DID WE WIN?

While reading the aforementioned fiscal and transportation challenges to the Marine Corps war reserve system, the pragmatist would note that Marine forces did achieve their OIF objectives within their available resources. Is this not direct evidence from which to conclude that the fiscal and delivery challenges discussed are relatively insignificant or even inconsequential? The question begs, if the war reserve system is so lacking how did the Marine force commander achieve success on the battlefield?

During OIF the Marine forces drew their WMR from the traditional combination of force-held, prepositioned, and in-stores stocks rounded out through the industrial base requirement. But with the agreement to shift the majority of force-held assets to LOGCOM, the deploying forces had very little on hand. Two of the three MPSRONs were downloaded to provide roughly 30 DOS for two MEBs, but I MEF in its contingency task organization equated to just over four MEBs worth of people and equipment. The sustaining power of the prepositioned ships was rapidly diluted and the PFMR and WMRSF were woefully inadequate. This placed the remaining requirement on resupply through LOGCOM by the in-stores stocks and the industrial base.

LOGCOM responded immediately as Headquarters Marine Corps was noted by the US Central Command (USCENTCOM) J4 Staff to be the first service to fully authorize

[8] BG Robert H. Scales, Certain Victory, figure 5-1.

employment of its war reserve. But upon running the requirements versus the in-stores stocks, the WMR shortfalls became reality. The emerging gap was further exacerbated as the inability to link material transportation requirements to the military sourced TPFDD became apparent. Shortcomings in the war reserve system were overcome through a three pronged attack; a bottom up approach at the tactical unit level, a top down approach from Headquarters Marine Corps and the Supporting Establishment, and a lateral effort across the USCENTCOM Service Components. The greatest areas of impact were in Class I, III, V, VIII, and IX.

From within the MEF, the divisional units went on a "Logistics Light Diet"[10] taking all measures to ensure the total effectiveness of limited, available resources. This approach went as far as the publication of a Division Commander's policy letter demanding that all Marines must eat the entire components of individually issued Meals-Ready-to-Eat (MRE) to ensure the total utilization of all available calories and preserving the limited stocks of combat rations. Model BA5590 Lithium batteries, a DoD wide shortage, were treated as gold and every effort was made to minimize their use as they are the predominant power source for many critical items such as tactical communications, laser range finder/designators, and expeditionary airfield lighting. Class IX stocking shortfalls were met prior to deployment through the cannibalization of equipment that was to remain at home stations. During combat operations, equipment was kept in action through innovative and heroic steps taken by mechanics and technicians using Battle-Damage-Assessment-and-Repair (BDAR) techniques or stripping working components from vehicles destroyed in action. Often hand fabricating

[9] Scott Gourley, "First Elements."
[10] LtCol J.J. Broadmeadow, "Logistics Support to 1st Marine Division During Operation Iraqi Freedom."

parts from pieces available on the battlefield or even bypassing systems to keep a major component in action, officers of 1st Marine Division report dragging incapacitated Abrams tanks and amphibious assault vehicles from one engagement to the next while mechanics rode onboard repairing systems to restore combat capacity.[11] All of this was done to maintain an effective fighting force despite the fact that no Class IX support reached the field units prior to the conclusion of the attack on Baghdad[12].

At the operational level, logistics requirements were met through less dramatic means. Aggressive use of crisis contracting mitigated or replaced the loss of a measured amount of WMR shortfall. Class III, both packaged oils and lubricants as well as bulk petroleum products, was predominantly available in the theater of operation or regionally acquirable.[13] Contracted caterers provided hot meals in the assembly areas, reducing the dependence on packaged combat rations and preserving them for use during offensive operations. Common Class IV building materials were also regionally acquired to some extent, mitigating the shortcomings on WMR delivery. Class VI items for health, hygiene, and comfort were also obtained to support the personal needs of the Sailors and Marines in the field. And finally, extremely limited Class IX repair parts were purchased in the region from commercial dealers that managed common equipment such as fork lifts, diesel engine components, and basic hydraulic components.

Laterally, at the service component level, constant coordination with all agencies ensured a common understanding of priorities as well as availability of funding to support regional contracting. Cross leveling agreements between services in theater also

[11] Ibid.
[12] 1stLt Christopher E. Rabassi, "What Happened to Class IX in Iraq," and the author's experience in OIF as the MARCENT G4 Logistics Operations Officer.

assured adequate Class V(w) as the US Army Joint Munitions Command was unable to respond, package, and deliver much of the stocks that were stored in the Continental United States (CONUS) prior to the commencement of hostilities.

From the top down, WRM supervisors at LOGCOM and other Marine Corps supporting commands were able to rapidly respond to the most critical shortfalls and work through solutions with support from DoD Agencies such as DLA as well as squeak some items through the airlift system on a space-available basis. Supply supervisors became investigators as they worked around the clock to uncover inventories of highly critical items not visible to any supply system, such as BA5590 batteries. Efforts were taken to gain contact with friendly militaries at all corners of the globe in order to contract or buy acceptable replacement power sources on this non-commercial item. Teams were flown to Norway to remove specific requirements from the prepositioned brigade set and ship them through rerouted deploying aircraft. But in the end, the bulk of the WMR items were sent to Kuwait via commercial sealift where they experienced an average of 60-75 days in transit,[14] arriving long after their required delivery date.

The cumulative results of all of these measures led to success, although with an appreciable risk on the battlefield. This can be chalked up to the "make it happen" attitude that prevails in the Marine Corps, from the civilian in Albany, GA to the Lance Corporal under fire in An Nasiryah, Iraq. But choosing methods of a last resort nature should never be the primary means of support—which is exactly what happens when a WMR policy is not properly funded nor available for incorporation in the transportation

[13] Commanders & Staff of 1st FSSG, "Brute Force Combat Service Support: 1st Force Service Support Group in Operation Iraqi Freedom."

plan. Of note, had the deployment process been extended or combat objectives taken longer to achieve, there was a significant risk to the ability to maintain the force on the battlefield.

OPERATIONAL DIRECTION FOR THE MAGTF COMMANDER

There are steps that can be taken both prior to and during crisis response to reduce logistical vulnerabilities. Of utmost importance is the effective management of the force-held stocks prior to conflict. While it can be assumed that peacetime budgets will continue to be constrained, commanders must understand the risk associated with shortfalls. Associated prepositioned sets are known material quantities. Commanders must ensure their WRMSF inventory is integrated with the associated MPSRON capabilities, gaining maximum value out of every dollar available. Material not on hand needs to be identified in order to maintain visibility and immediate identification of shortages for host nation support, crisis contracting, or transfer to LOGCOM. During planning, accurate reporting and construction of the TPFDD enables efficient delivery through military transportation systems reducing the loss of transportation or rescheduling conflicts during execution.

During execution, no lesson is more obvious than the requirement to make more out of less. This applies to transportation, consumption, and utilization. Recognizing the logistical environment and capitalizing on crisis contracting to exploit regional capabilities will extend the material reach of the force—reducing transportation requirements as well as filling gaps in peacetime inventories. Material shortages can first

[14] Transit time for commercial sealift used was between 39-59 days with 20 days of handling and inland transport between both CONUS and Theater handling points. See Appendix B as provided by MARCENT G4 Sustainment Chief.

be mitigated through local or regional purchases, circumventing long lead times generated by CONUS shipping agents and industry.

Remaining gaps in sustainment must be filled through local measures to reduce material usage. Once critical material requirements are identified, a commander may set a controlled supply rate to minimize their consumption and ensure prioritization of resource allocation. Finally, the training of mechanics and technicians to understand total system functions enables them to bypass or replicate peripheral functions and keep more weapon systems in the fight while decreasing their dependence on the supply chain (BDAR). These steps enable a MEF to extend its operational reach within the fixed physical constraints dictated by fiscal and transport limitations.

OPERATIONAL DIRECTION FOR THE JOINT FORCE COMMANDER

Operational lessons can be drawn in many areas, but none more important for the joint force commander (JFC) than to understand and maintain an accurate picture of his logistical posture. The WMR difficulties as discussed are not only intrinsic to Marine forces, as evidenced during OIF all services experience crisis management due to funding and transportation constraints at some level or another[15].

As most logisticians will quickly point out, the culminating point (or operational reach) of any force is nearly always dictated by logistical limitations. An understanding of logistical implications aids in the development of sustainable plans. Additionally, there are active steps a joint force can take to mitigate shortages and gain efficiencies across the components.

[15] Dept. of the Army, "3rd Infantry Division After Action, OIF," as well as the author's experience.

Command relationships in the logistics realm can become convoluted at the joint force level. But ultimately, regardless of functional organization of the joint force, logistics is always a service responsibility. While there are many provisions and responsibilities outlined in Joint Publications 0-2[16] and 4-0[17] such as common item support and directive authority for logistics, these are forcible measures. Fostering a unified effort across the joint force will overcome the need to enforce management tools and provide for more rapid response and interaction between service components. By nature, logistics in itself is a competitive environment where allocation of resources is based more on the timeliness of the request than the priority of its application. When unity of effort as a joint force is obtained, operational priorities are central to the total effort and logistical conflicts between services become transparent. Cross-leveling and critical management of short supplies will occur between service components without the need for intervention by the Joint Force Commander.

Many service shortages are factual trends in national support, such as the shortage in lithium batteries experienced in OIF. The surfacing of a shortage in one service component is normally an indicator of a coming greater problem across all components when dealing with common items/common materials. The most substantial contribution a JFC can make to logistics is not in-theater prioritization through the exercise of directive authority for logistics, but through engagement of national resources.

Speed of operations is also a critical factor. Taking time to establish forces and build sustainment is a double-edged sword as large forces in the field will consume material

[16] JP 0-2, Unified Action Armed Forces (UNAAF).
[17] JP 4-0, Doctrine for Logistic Support of Joint Operations.

sometimes as fast as it can be replaced. The commander must consider the logistical risk in delaying operations as well.

CONCLUSION

The United States Marine Corps, as the nation's premier "Force in Readiness," continues to be the most flexible and responsive conventional force in the arsenal. In the provision of forces less than a MEF, there are no equals in capability or force projection in an austere environment. But when a full Marine Expeditionary Force is employed the current logistics system will continue to provide challenges that cannot be ignored. Operational commanders must understand the capacity of the Marine Corps war reserve system as well as the nature and maturity of existing theater infrastructure to fill existing gaps in operational sustainment.

APPENDIX A
CLASSES OF SUPPLY

MAJOR CLASS		SUB-CLASS	
I	Subsistence, rations.	A C R S	Air Combat Rations Refrigerated Subsistence Nonrefrigerated Subsistence
II	Clothing, individual equipment, organizational tool sets, tool kits, handbooks, administrative and housekeeping supplies and equipment.	B E F M T	Ground Support Material General Supplies Clothing and textiles Weapons Industrial Supplies
III	Petroleum, oils, and lubricants: petroleum, fuels lubricants, hydraulic and insulating compressed gasses, bulk chemical products coolants, de-icing and antifreeze compounds, together with components and additives of such products, and also coal.	A W	Air Ground (Surface)
IV	Construction: construction material, to include installed equipment and all fortification/barrier material.		
V	Ammunition: all types, including chemical, radiological, and special weapons, bombs explosives, mine fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.	A W	Air Ground (Surface)
VI	Personal demand items (non-military sales items).		
VII	Major end items: a final combination of end products which are ready for their intended use; i.e., launchers, tanks, vehicles, mobile machine shops, etc.	A B C D G K L N T	Air Ground Support Material Combat Rations Administrative Vehicles Electronics Tactical Vehicles Missiles Special Weapons Industrial Supplies
VIII	Medical material, including medical-peculiar repair parts.		
IX	Repair parts (less medical-peculiar repair parts): all repair parts and components, including kits, assemblies, and subassemblies (reparable and nonreparable) required for maintenance support all equipment.	A B C D K L N T	Air Ground Support Material Combat Rations Administrative Vehicles Tactical Vehicles Missiles Special Weapons Industrial Supplies
X	Material to support non-military requirements (e.g., agriculture and economic development) not included in classes I through IX.		

From MCO P4400.150E and JP 4-0

APPENDIX B
COMMERCIAL SEALIFT IN SUPPORT OF WRM

The following MAERSK SEALAND Tracking Reports were provided as sample documentation from the MARCENT G4 Sustainment Branch in tracking War Reserve Material and Resupply in support of Marine Forces in OIF. Loading and discharge reports reflect only sea movement times and do not incorporate packaging, port handling and inland transportation requirements.

CURRENT SHIPMENT To top
Activity
Location
Date and time
Vessel
Voyage

Gate In Export Full
Charleston Terminal, Charleston, South Carolina, United States
05-Feb-2003 09:42

Load Full
Charleston Terminal, Charleston, South Carolina, United States
25-Feb-2003 04:57
MAERSK VIRGINIA
0303

Discharge Full
Salalah Terminal, Salalah, Oman
13-Mar-2003 04:35
MAERSK VIRGINIA
0303

Load Full
Salalah Terminal, Salalah, Oman
14-Mar-2003 17:31
GREENWICH MAERSK
0303

Discharge Full
Jebel Ali Terminal, Jebel Ali Dubai, U. A. E.
18-Mar-2003 05:18
GREENWICH MAERSK
0303

Load Full
Jebel Ali Terminal, Jebel Ali Dubai, U. A. E.
30-Mar-2003 09:20
SL INDEPENDENCE
0307

Discharge Full
Shuwaikh Terminal, Shuwaikh, Kuwait
05-Apr-2003 08:00
SL INDEPENDENCE
0307

CURRENT SHIPMENT To top
Activity
Location
Date and time
Vessel
Voyage

Gate In Export Full
Norfolk Sea-Land, Norfolk, Virginia, United States
24-Feb-2003 15:07

APPENDIX B
COMMERCIAL SEALIFT IN SUPPORT OF WRM

Load Full
Norfolk Sea-Land, Norfolk, Virginia, United States
28-Feb-2003 13:13
MAERSK GEORGIA
0305

Discharge Full
Jebel Ali Terminal, Jebel Ali Dubai, U. A. E.
23-Mar-2003 13:52
MAERSK GEORGIA
0305

Load Full
Jebel Ali Terminal, Jebel Ali Dubai, U. A. E.
30-Mar-2003 09:20
SL INDEPENDENCE
0307

Discharge Full
Shuwaikh Terminal, Shuwaikh, Kuwait
04-Apr-2003 14:30
SL INDEPENDENCE
0307

CURRENT SHIPMENT To top
Activity
Location
Date and time
Vessel
Voyage

Gate In Export Full
Norfolk Sea-Land, Norfolk, Virginia, United States
06-Mar-2003 13:41

Load Full
Norfolk Sea-Land, Norfolk, Virginia, United States
13-Mar-2003 09:22
MAERSK MISSOURI
0305

Discharge Full
Jebel Ali Terminal, Jebel Ali Dubai, U. A. E.
06-Apr-2003 20:47
MAERSK MISSOURI
0305

Load Full
Jebel Ali Terminal, Jebel Ali Dubai, U. A. E.
08-Apr-2003 22:35
SL INDEPENDENCE
0309

Discharge Full
Shuwaikh Terminal, Shuwaikh, Kuwait
14-Apr-2003 06:30
SL INDEPENDENCE
0309

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"We must organize and operate in such a way that commanders have absolute confidence that required support will be provided when and where it is needed."
-- General James L. Jones, 32d Commandant, USMC

"A vision without resources is a hallucination"
-- General Williams, ACMC