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MARINE CORPS ORDER 4400.39A

From: Commandant of the Marine Corps  
To: Distribution List

Subj: WAR RESERVE MATERIEL (WRM) POLICY

Ref: See Enclosure (1)

Encl: (1) References  
(2) War Reserve Materiel Requirements

1. Situation. This Order promulgates policy for the Marine Corps War Reserve Materiel (WRM) program, encompassing the concept, purpose, scope, and methodologies used to identify the War Reserve Materiel Requirement (WRMR), sourcing options, and projected deficiencies to inform Service-level WRM investments. This Order identifies the roles and responsibilities that enable the Marine Corps to effectively prepare for and sustain initial combat operations using WRM in accordance with references (a) through (q).

2. Cancellation. MCO 4400.39 and NAVMC 4000.1

3. Mission. To identify WRM requirements for initial Fleet Marine Force (FMF) ground materiel sustainment in support of Geographic Combatant Commander (GCC) contingency planning and execution.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent

(a) Purpose. References (a) through (c) require the Services to strategically locate Prepositioned War Reserve Materiel (PWRM) to facilitate a timely response in support of Combatant Commander (CCDR) requirements during initial phases of an operation. To respond quickly to requirements, the Marine Corps shall size, manage, and pre-position its WRM resources to ensure a viable Service-level WRM program that enables initial FMF contingency response.

(b) Method. The Marine Corps develops and implements a Materiel Risk Management (MRM) Plan to assess WRM requirements and inform Service-level investment decisions that reduce materiel risk to forces supporting Operational Plans (OPLAN) and Concept Plans (CONPLAN).

(c) Endstate. The Marine Corps provides sufficient ground WRM to sustain the FMF during initial employment until theater support capability is available.

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(2) Concept of Operations

(a) Doctrinally, references (e) through (g) state that Marine Expeditionary Brigades (MEB) deploy with 30 days of supplies (DOS) and Marine Expeditionary Forces (MEF) deploy with 60 DOS to self-sustain initial operations and incrementally build forces ashore until theater logistics pipelines are established. The War Materiel Requirement (WMR) encompasses all materiel required to support the deployed forces to include replacing combat losses. If theater sustainment begins at day 90; WRMR is 60 DOS for a MEB and 30 DOS for a MEF plus replacing combat losses during that same time-period.

(b) The Marine Corps invests in WRM to ensure the Service has on hand or has the ability to rapidly acquire the materiel needed to resupply deployed forces before theater logistics begins delivering common item support. Additionally, procured WRM will be prepositioned as far forward as possible to improve response time as part of the MRM plan and in accordance with reference (d).

(c) To determine the type and quantity of WRM required and minimize investments in materiel above peacetime operating stocks and offsets from prepositioned stocks, the Marine Corps will assess a myriad of planning factors, item criticality, responsiveness, and lifecycle costs to maintain as a part of a MRM plan capability, to recommend Service retained WRM investments.

(d) Planning factors include, but are not limited to, force size, combat intensity, feed plan, Enemy Prisoner of War (EPW) plan, equipment density, force build-up, location, climate, demand history, percent gender forces, and timeframe.

(e) Due to the complexity of calculations, the scope of this policy is limited to ground materiel: Class I (Rations/Water), II (Individual Equipment and General Supplies), III (Packaged Petroleum, Oil and Lubricants [POL]), IV (Fortification, Construction), VI (Personal Demand Items), VII (End Items), Limited VIII (Table of Equipment [T/E] Items), and IX (Repair Parts, Secondary Repairables [SECREPs] and Batteries).

(f) The following classes of supply are addressed in separate orders and not calculated by the USMC War Reserve Program (WRP) or covered in this policy:

1. Class III (Bulk POL) - OPNAV 4020.15P and DoDI 4140.25.
2. Class V (Munitions) - MCO8000.7A and OPNAVINST 8000.16.
3. Class VIII (Medical Sustainment) - NAVMC 4000.2A & 3A.

(3) Conduct of Operations

(a) The Service level WMR/WRMR is calculated by applying appropriate planning factors published in reference (h).

(b) The Service WRMR for Class II/VII (Type 1, Combat Essentiality Code [CEC] 1, Stores Account Code [SAC] 3) equals the combat replacement requirement (CRR) reflected in reference (h). The CRR informs

the Approved Acquisition Objective (AAO) development per reference (i). Service WRMR that cannot be sourced from Prepositioning Programs and WRMR In-stores (WRMR-I) are considered WRMR deficiencies that will be reviewed as a part of the MRM plan.

(c) Service WRMR deficiencies will be sourced against Defense Logistics Agency (DLA), contingency contracts, inter-service support agreements (ISSA) and host-nation support (HNS), and will be assessed for supply chain vulnerability (i.e., production, availability, and delivery, etc.), item criticality, long-term storage requirements, lifecycle management, and funding requirements to identify mitigation strategies.

(d) Service WRMR deficiencies that are categorized Mission Critical or Mission Essential military equipment (ME) will be categorized as High-Risk Materiel and will be given the highest consideration for Program Objective Memorandum (POM) investments as Service retained WRM in accordance with reference (d). Newly procured Service retained WRM will be positioned where it will improve responsiveness to the force, support optimal storage location, lifecycle management, and stock rotation options.

(e) The baseline force for Operational Level WMR and WRMR calculations will be informed by the force size, duration and combat intensity reflected in OPLANS and CONPLANS. Operational WRM Mitigation Plans (i.e., withdrawal plans, prepositioning distribution plans, contingency contracts, ISSAs, etc.) will be developed to identify global sourcing solutions in support of the OPLAN/CONPLAN that will assist in Time Phased Force Deployment Data (TPFDD) development. Additional details are described in Chapter 2.

b. Subordinate Element Tasks

(1) Deputy Commandant for Installations and Logistics (DC, I&L)

(a) Develop and maintain WRM policy.

(b) Establish methods and processes to determine: Service WRMR expressed in DOS; Periods of Support (POS) CRR for ground materiel (Classes of Supply I, III(P), IV, VI, and IX); CRR for Classes of Supply II and VII; and publish supporting policy and procedural documentation.

(c) Serve as the Marine Corps lead and provide fiscal oversight for WRM related POM initiatives (less Class II/VII coordinated with Marine Corps Systems Command [MARCORSYSCOM] and adjudicated through normal deficiency processes).

(d) Identify the appropriate planning factors, Combat Active Replacement Factors (CARF), and calculated CRRs used in calculating the Service WMR and WRMR through staffing of reference (h).

(e) Submit table of organization and equipment change requests (TOECR) to update the CARFs as appropriate.

(f) Coordinate Service WRMR reviews in coordination with (ICW) Deputy Commandants (DC) Plans, Policies, and Operations and DC Combat Development and Integration (CD&I), the FMF, Marine Corps Service Components (regional Marine Forces [MARFORs]), MARCORSYSCOM, and Marine Corps Logistics Command (MARCORLOGCOM), and develop MRM planning results for consideration

for future procurement within expanded Marine Corps Prepositioning Network (MCPN) and War Reserve (WR) locations that support OPLANs/CONPLANs. The relationship between Service and Operational WMR/WRMR reviews and their supporting operational planning teams (OPT) is addressed in further detail in Chapter 1, paragraphs 3 and 4.

(g) Co-lead with MARCORSYSCOM and MARCORLOGCOM the Configuration Control Requirements Board (CCRB) Program to manage change and review updates and design modifications to the WR Automated Information System (AIS); the Integrated Materiel Analysis Toolset (IMAT) discussed in Chapter 6.

(h) Review/approve release of WRM requisitions when requested by the supported FMF/MARFOR and coordinated with P&R for fund cite authorization to MARCORLOGCOM.

(i) Coordinate the response to the annual DLA data call for Service WRMR registration.

(j) Provide initial WR AIS training and education during development and testing.

(2) Deputy Commandant for Plans, Policies, and Operations (DC, PP&O)

(a) Support DC Installations and Logistics (DC I&L) efforts to identify the Service planning factors during the staffing of reference (h) to support calculation of Service WRMR.

(b) Support Materiel Risk Assessments (MRA) for WRM Class II/VII shortfalls and review risk mitigation (RM) strategies.

(c) Participate in the WR AIS CCRB.

(3) Deputy Commandant for Combat Development and Integration (DC, CD&I)

(a) Support MRAs for WRM Class II/VII RM strategies including AAO adjustments to WRMR in Total Force Structure Management System (TFSMS).

(b) When validating the AAO, consider the CRRs and shortfalls published within reference (h) and coordinate TOECR's submission with DC I&L (LPO) to avoid inflating WRMR-I AAO which increases the unfunded fiscal burden on MARCOCRLOGCOM, reducing WRMR-I readiness.

(c) Participate in WR AIS CCRB.

(d) Support I&L in updating and maintaining CARFs in TFSMS.

(e) Support DC I&L efforts to identify the Service-level planning factors during the staffing of reference (h) in support of Service WRMR.

(f) Support DC I&L review of service WRMR and development of MRM planning results for consideration for future procurements.

(4) Deputy Commandant for Programs and Resources (DC, P&R)

(a) Coordinate with HQMC I&L (LPO) on WRM program funding requirements identified in the POM.

(b) Support MRAs on WRM shortfalls and support the review/development of RM strategies.

(c) Provide funding for WRM withdrawals in support of numbered OPLANs when approved by HQMC I&L (LPO) and requested by the FMF/MARFOR.

(5) Deputy Commandant for Aviation (DC AVN). Support MRAs for aviation ground equipment WRM shortfalls and support the review/development of RM strategies.

(6) Commanding General, Marine Corps Logistics Command (MARCORLOGCOM)

(a) Support FMF/MARFOR OPLAN/CONPLAN reviews as required, in coordination with HQMC I&L (LPO).

(b) Review and adjudicate WR AIS generated requirements output in coordination with FMFs/MARFORs and HQMC I&L (LPO).

(c) Support FMF/MARFOR-initiated operational-level reviews, identify risk to sourcing War Reserve Withdrawal Plans (WRWP) based on feedback from sources of supply and United States Transportation Command (USTRANSCOM), identify WRMR in appropriate numbered OPLAN TPFDD, and verify unit line numbers (ULN) to the supported MARFOR as directed.

(d) Support annual DLA data call, review DLA's deficiency mitigation strategies, and incorporate the impact into the next Service level WRMR review for consideration.

(e) Develop RM strategies for WRMR deficiencies in support of MRAs and MRM planning and report results to the appropriate Service-level review OPT.

(f) Provide supporting documentation to HQMC I&L (LPO), as requested, in support of Program Reviews as part of the Planning, Programming, Budgeting, Execution and Assessments (PPBEA) process under the appropriate Marine Corps Program Code (MCPC).

(g) Within approved POM/Program Evaluation Board (PEB) funding guidance, ensure on-hand (O/H) WRMR-I stocks identified to meet numbered OPLAN WRMR are serviceable and ready for issue (RFI) in accordance with references (j), (k), and (l) and processes are in place to prepare, package, and/or certify for transport to the AOR in accordance with TPFDD mode and shipment requirements.

(h) Release WRM requisitions to DLA and other sources of supply upon request from the FMFs/MARFORs and approval from HQMC I&L (LPO) as part of the WR execution plan.

(i) ICW MARFOR/FMF commanders, validate and update the TPFDD and register WRMR lift requirements with USTRANSCOM, as required.

(j) Maintain historical combat loss data to support CARF updates, for reporting readiness, and reporting to the program managers for budgeting and POM for replacements as applicable.

(k) Co-lead the WR AIS CCRB with HQMC I&L (LPO) and MARCORSYSCOM.

(l) Support DC I&L review of service WRMR and development of MRM planning results for consideration for future procurements.

(7) Commander, Marine Corps Systems Command (MARCORSYSCOM) and Program Executive Offices (PEO)

(a) Support MRAs for WRM Classes II and VII shortfalls and the development of RM strategies to include development of wartime contingency contracts with a priority on USMC unique items.

(b) Maintain the Authority to Operate (ATO) for the current WR AIS and retain historical data.

(c) Maintain and upgrade all AIS associated with WR through programming, configuration management, performance, database administration, and cost scheduling.

(d) Develop, publish, and maintain standard operating procedures for the current WR AIS.

(e) Co-lead the WR AIS CCRB with HQMC I&L (LPO) and MARCORLOGCOM.

(f) Support DC I&L review of service WRMR and development of MRM planning results for consideration for future procurements.

(8) Commander, Marine Forces Pacific (COMMARFORPAC) / Commanding General, FMF Pacific (CG FMFPAC) and Commander, Marine Forces Command (COMMARFORCOM) / Commanding General, FMF Atlantic (CG FMFLANT)

(a) In coordination with HQMC I&L (LPO-2), initiate periodic OPLAN reviews, coordinating with subordinate units and attached Navy Expeditionary Combat Command (NECC) units to submit OPLAN/CONPLAN parameters (i.e., feed plan, environment, EPW plan, etc.) to MARCORLOGCOM that will be used to determine OPLAN specific shortfalls and inform Service-level mitigation strategies.

(b) In accordance with reference (j), ensure maintenance of electronic records of peacetime operating stocks in an AIS of record (e.g., Global Combat Support System - Marine Corps [GCSS-MC]) to assist MARCORLOGCOM in determining stock availability to support the WRMR.

(c) Validate and update the TPFDD and register WRMR lift requirements with USTRANSCOM, as required.

(d) Coordinate with Headquarters Marine Corps (HQMC) (I&L/PP&O/P&R) for authorization of funding and MARCORLOGCOM release of requisitions to DLA and other sources of supply in support of OPLAN/CONPLAN execution.

(e) Conduct annual training for War Reserve personnel as appropriate.

(f) Support DC I&L review of service WRMR and development of MRM planning results for consideration for future procurements.

(9) Commander, Marine Corps Forces Reserve (MARFORRES). Support MRAs on WRM shortfalls and support the review/development of RM strategies.

(10) Commander, U.S. Marine Corps Forces Europe & Africa (MARFOREUR/AF), Commander, U.S. Marine Corps Forces Central Command (MARCENT), Commander, U.S. Marine Corps Forces Northern Command (MARFORNORTH), Commander, U.S. Marine Corps Forces South (MARFORSOUTH)

(a) Initiate periodic OPLAN/CONPLAN operational-level reviews, coordinate with apportioned/allocated forces to submit OPLAN/CONPLAN parameters to MARCORLOGCOM that will be used to determine Operational WMR and WRMR and obtain OPLAN/CONPLAN specific shortfalls to inform Service mitigation strategies.

(b) Validate and update the TPFDD and register WRMR lift requirements with USTRANSCOM as required.

(c) Request Headquarters Marine Corps (HQMC) (I&L/PP&O/P&R) authorization for funding and MARCORLOGCOM to release requisitions to DLA and other sources of supply in support of OPLAN/CONPLAN execution.

(d) Support DC I&L review of service WRMR and development of MRM planning results for consideration for future procurements.

c. Coordinating Instructions

(1) DC I&L is the supported Service Headquarters Department for WRM and deliberate MRM processes reflected in this Order.

(2) All other commands are in support of the WRP to ensure WRM supports program guidance, objectives, and operating force requirements and are required to participate in designated MRM OPTs and Working Groups (WG) as laid out in this Order.

5. Administration and Logistics

a. Privacy Act. Any misuse or unauthorized disclosure of Personally Identifiable Information (PII) may result in both civil and criminal penalties. The Department of the Navy (DON) recognizes that the privacy of an individual is a personal and fundamental right that shall be respected and protected. The DON's need to collect, use, maintain, or disseminate PII about individuals for purposes of discharging its statutory responsibilities shall be balanced against the individuals' right to be protected against unwarranted invasion of privacy. All collection, use, maintenance, or dissemination of PII shall be in accordance with the Privacy Act of 1974, as amended (5 U.S.C. 552a) and implemented per SECNAVINST 5211.5F.

b. Records Management. Records created as a result of this directive shall be managed according to National Archives and Records Administration (NARA)-approved dispositions per SECNAV M-5210.1 CH-1 to ensure proper maintenance, use, accessibility and preservation, regardless of format or medium. Records disposition schedules are located on the Department of the Navy/Assistant for Administration (DON/AA), Directives and Records Management Division (DRMD) portal page at: <https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx>. Refer to MCO 5210.11F for Marine Corps records management policy and procedures.

c. Recommendations. Recommendations concerning the contents of this Order may be forwarded to the Deputy Commandant, Installations and Logistics (LPO-2).

6. Command and Signal

a. Command. This Order is applicable to the Marine Corps Total Force.

b. Signal. This Order is effective the date signed.



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Deputy Commandant for  
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References

- (a) DoD Instruction 3110.06, War Reserve Materiel (WRM), 7 January 2019
- (b) DoD Directive 3110.07 W/ CH 1, Pre-positioned War Reserve Materiel Strategic Policy, 19 June 2018
- (c) CJCS Instruction 4310.01E, Logistics Planning Guidance for Pre-Positioned War Reserve Materiel, 31 January 2020
- (d) DoDM 4140.01 Volume 5 W/ CH 1, DoD Supply Chain Materiel Management Procedures: Delivery of Materiel, 17 September 2018
- (e) MCDP 1-0
- (f) MCWP 4-11
- (g) MCTP 3-40C
- (h) MCBul 4400
- (i) MCO 5311.1E
- (j) MCO 4400.201
- (k) MCO 4790.2
- (l) MCO 4790.25
- (m) 5 U.S.C. §552a
- (n) SECNAVINST 5211.5F
- (o) SECNAV M-5210.1
- (p) MCO 5210.11F
- (q) MCO 7100.13

## Chapter 1

### War Reserve Program

1. Introduction. HQMC I&L (LPO) provides oversight of WRM through the WRP using MRM planning to highlight materiel risk associated with combat operations. Consistent with reference (i), WRP elements provide materiel to source against the WRMR and, when required, augment FMF T/E requirements due to degraded readiness and/or unfunded acquisition objectives. An MRM plan will assess the health of WRM through the Marine Corps' ability to source against all available materiel to meet the War Material Requirement (WMR) for the specified duration of the Service Level plan or OPLAN until theater sustainment is established. An acronym list is provided in Appendix A and a glossary in Appendix B.

2. Purpose. To describe the methodology and processes for determining WRM deficiencies for Service and Operational WRM.

3. WRP Overview. The WRP consists of WRM oversight and advocacy to support the long-term investment and positioning of WRM. Program advocacy includes facilitating reviews of Service and Operational WMR/WRMR, developing and approving the POM/Budget for WRM investments, and prioritizing current WR AIS programming to support the WRP.

#### a. WMR/WRMR Determination, Service and Operational-Level Reviews

(1) Determining WRM requirements and deficiencies is a process that follows a sequential, yet nonlinear, methodology to achieve its primary objective to identify the WRMR for a given combat scenario, identify sourcing solutions, and critical/high risk materiel deficiencies. At the Service-level, critical/high risk materiel deficiencies inform POM initiatives, the AAO, and WRM positioning. At the Operational-level, critical/high risk materiel deficiencies inform global sourcing and positioning options, materiel RM strategies and the Service Level MRM OPT.

(2) HQMC I&L (LPO) will review WMR/WRMR from a Service and operational level in coordination with PP&O, CD&I, MARFORS, MARCORSSYSCOM, and MARCORLOGCOM. The Service or Operational approach is to be preceded by CMC or FMF/MARFOR Commander guidance to establish common goals and objectives. Each review uses a commodity/item approach and is conducted for a specific class of supply or item that needs to be reviewed in more detail given changes in industrial base capacity or anticipated inventory challenges.

(3) The type of approach used for reviewing WRM will shape the framework for the plan of actions and milestones (POA&M) and timeline to complete the review. The WRP will bring stakeholders together to validate planning factors, assumptions, WRM deficiencies, resourcing options, and mitigation strategies. MRM OPTs will be conducted to facilitate the process of validating requirements, approving sourcing options, reviewing risk analysis, and approving WRM investments.

(a) Service Level Review. An annual Service-level review of WRM will be based on a baseline force, duration, combat intensity, and other planning factors as identified in reference (h). The WMR/WRMR will be calculated using current WR AIS to identify requirements, develop sourcing options, risk assessments, and mitigation strategies. Stakeholders will validate assumptions, planning factors, mitigation strategies and prioritize

investments. The Service-level reviews will balance Marine Corps forces offered in support of multiple OPLANS/CONPLANS to prevent OPLAN/CONPLAN WRM attainability becoming a constraint. The Service will also consider additional constraints such as location, distribution and environment. The Service-level review will reflect the greatest by-National Item Identification Number (NIIN) requirement, balanced across the Marine Corps forces offered in support of OPLAN/CONPLANS.

(b) Operational Level Review. A review of the Operational WRMR (i.e., OPLAN related) will be initiated by FMFs/MARFORs and coordinated with HQMC I&L (LPO) and MARCORLOGCOM. Facilitation of the Operational WRMR review will be conducted in a similar manner as the Service WRMR review, however, force size, combat intensity, and sourcing options will be informed by forces assigned in the TPFDD, deployment flow, and required delivery dates for materiel deficiencies. Results of the operational-level review will inform the RM strategies of the Service-level review.

(c) Both the Service-level and operational-level reviews will use the requirements, sourcing and Risk Mitigation OPT constructs provided in paragraph 4 below.

b. POM/Budget

(1) Materiel deficiencies and risk assessments will inform the WRM POM submission and annual budget. HQMC I&L (LPO) will program and budget WRM and request that DC, P&R distribute funding as required based on phasing plans, ready for issue requirements, and approved funding.

(2) POM submissions. WRM POM initiatives will be submitted to HQMC I&L (LPO) for consolidation and in accordance with POM data calls and reference (q).

(3) Investment strategies for ME and secondary items are detailed in Chapter 3.

c. WR AIS. HQMC I&L (LPO) provides oversight and fiscal management for the WR AIS to support a standard method of determining materiel requirements, sourcing, risk scoring, and identifying materiel deficiencies. Program updates and design modifications will be reviewed by a CCRB co-led by HQMC I&L (LPO), CD&I, MARCORLOGCOM and MARCORSYSCOM. WR AIS relationships to the broader logistics information technology portfolio is discussed in Chapter 6.

4. WR OPTs. To facilitate the WMR/WRMR reviews, HQMC I&L (LPO) will establish OPTs to support the various stages and phases of the MRM process. The following OPTs and objectives are envisioned to support the planning effort:

a. Requirements OPT

(1) Review CMC and/or FMF/MARFOR guidance.

(2) Validate Service Baseline Force or Forces in TPFDD.

(3) Address apparent gaps, redundancies or outliers in the WR AIS requirement output data.

(4) Provide validated requirements data to the Sourcing OPT.

b. Sourcing OPT

- (1) Validate unit prioritization for sourcing
- (2) Validate use of Prepositioning and its distribution.
- (3) Conduct sourcing within the WR AIS to obtain recommended sourcing options.
- (4) Provide unsourced WRM data set to the Risk Mitigation OPT.

c. Risk Mitigation OPT

(1) Incorporate RM strategies for WRMR deficiencies developed by MARCORLOGCOM to conduct risk analysis within the WR AIS. These strategies may be accompanied by examination of the industrial base's ability to scale production in time of conflict, the exposure of the item to global supply chain risks by the supplier, policies that might be needed in time of conflict to increase production, and the role of the organic industrial base for these items.

(2) Validate WR AIS risk categories and risk scores and produce a prioritized list of shortfalls for investment consideration.

(3) Validate and prioritize investment strategy.

5. DLA Data Calls

a. Service WRMR Deficiencies. In addition to WRP advocacy, the Marine Corps will support DLA data calls to forecast Service-level requirements for supported classes of supply to inform DLA inventory management decisions. HQMC I&L (LPO) will coordinate with MARCORLOGCOM (G3/5) to submit data based on the most recent Service-level WRMR review. Upon receipt of DLA's response to USMC data submissions, MARCORLOGCOM will review DLA's mitigation strategies and incorporate them into the next Service-level WRMR review.

b. Operational WRMR Deficiencies. Each MARFOR will coordinate with their regional DLA representative and/or Theater Support Command (TSC) to provide forecasted deficiencies to support the total OPLAN/CONPLAN requirements for a specified time period. These forecasts will be provided to HQMC I&L (LPO) and MARCORLOGCOM to support OPLAN/CONPLAN WMR/WRMR reviews. During periodic Service-level reviews, any DLA or other source of supply deficiencies that negatively impact the Marine Corps' ability to support a specific OPLAN will be identified to HQMC I&L(LPO) and the affected MARFOR to determine RM actions.

6. Readiness Reporting. Reporting the readiness of WRM is considerably more complex than standard materiel readiness reporting procedures. WRM readiness is a measure of the Marine Corps' ability to effectively resource combat forces during operations and sustain those operations before theater logistics is established.

a. Service WMR Readiness. Readiness for Service WMR is measured by the Marine Corps' ability to resource the WMR for a specific planning scenario based on existing inventory and RFI status.

b. Operational WRMR Readiness. Readiness for Operational WRMR is measured by the Marine Corps' ability to resource the WRMR for the force reflected in the OPLAN/CONPLAN for the first 90 days of operations. A risk assessment will be conducted for any materiel not in existing inventory to identify Service WMR investments.

c. OSD and Joint Reporting. MRM facilitates OSD and Joint Staff reporting requirements.

## Chapter 2

### Materiel Risk Management

1. Introduction. WRM investments are critical to ensuring the Service is able to rapidly acquire the materiel needed to resupply deployed forces engaged in combat before theater logistics support is operational. HQMC I&L (LPO) will identify WRM deficiencies for Service investments, informed by the MRM planning cycle, to minimize materiel deficiencies that are critical to enabling operational readiness.

2. Purpose. The purpose of this chapter is to identify the methodology and processes for the MRM planning cycle to develop mitigation strategies for high-risk WRM deficiencies for Service and Operational WRM requirements.

3. Overview. MRM planning cycle is a process for assessing the materiel risk of WRM deficiencies identified through the WMR/WRMR review process and developing mitigation strategies that minimize WRMR deficiencies considered high-risk to operational readiness. The MRM planning cycle consists of determining the WMR/WRMR, developing sourcing solutions for WMR/WRMR deficiencies, identifying mitigation strategies and associated risk for WRMR not readily available in current inventory, and developing WMR investment options for Service or operating force decision. The MRM planning process for service level and operational level is similar.

#### 4. Service Level MRM

##### a. Determining Service WMR

(1) The Service WMR calculations and materiel risk analysis are conducted annually to support POM initiatives, provide DLA updated materiel requirement estimates, inform the WRM pillar of the AAO established by reference (i), and develop mitigation strategies to improve future sourcing options.

(2) To support the above objectives, Service WMR is calculated using the current WR AIS. The following planning factors are used to establish baseline WMR and WRMR:

(a) Service WMR is calculated against a baseline force and period of support defined in planning guidance provided in reference (h). WMR is calculated to inform the process about deficiencies that may already exist within the baseline force and must be mitigated.

(b) Geographical location is not considered in the Service WMR/WRMR calculations.

(c) The CARF used for Class II/VII WRMR calculations will be based on the planning factors identified by reference (h). The CARF rate is multiplied by the quantity of each TAMCN in the Equipment Density List (EDL) for each 30-day POS.

(d) Climate conditions (e.g., Extreme Hot, Hot, Cold, and Extreme Cold) are used to establish unique climate materiel requirements.

(e) Historical usage data for Class III(P), Class IV and Class IX is retrieved from GCSS-MC and is calculated using the current WR AIS or is



retrieved from other AIS or manual usage data from open purchases.

(3) Planning factors and assumptions are used to calculate the Service WMR and the Service WRMR to develop sourcing and sequencing options that support the baseline concepts of deployment and employment. Chapter 3 provides additional detail on planning factors and considerations for each class of supply.

b. Sourcing Service WMR

(1) Sourcing solutions are developed to match existing inventory to the WMR. The methodology for sourcing the Service WMR is informed by concept of operations, unit availability, and operational guidance provided by HQMC (CD&I/PP&O) and FMF/MARFOR Commanders.

(2) Sourcing WMR methods and processes are specific to classes of supply (see Chapter 3). In general, the sourcing priority for Service WMR is peacetime operating stocks, prepositioned stocks, global sourcing, DLA, and Joint Logistics Enterprise (JLEnt).

(3) WMR deficiencies are identified using the current WR AIS to source the calculated requirements against existing inventories. Both deficiencies and sourcing options are provided to the FMFs/MARFORs for validation and continued risk analysis. Sourcing OPTs will consider planning factors, sourcing origination, MEF Operating stock levels available for supporting deploying forces (including those held under stockage agreements with DLA), prepositioning inventory, and Landing Force Operational Reserve Materiel (LFORM). The Sourcing OPT main objective is validating WMR deficiencies and identifying sourcing options.

c. Service Level Risk Assessment. Risk assessments include risk analysis and RM and are conducted for each WMR deficiency. Within WRM management, deficiencies are unfilled requirements from within USMC enterprise inventory, are the subject of the MRM process and, if qualified, passed to external sources of supply. Shortfalls are unfilled requirements due to shortages in the entire JLEnt inventory and are subject of the MRM process to determine mitigation strategies. Both deficiencies and shortfalls can also be caused by the lack of timely distribution (failure to meet GCC required delivery dates [RDD]) even if the inventory exists within the USMC or JLEnt.

(1) Risk Analysis. WMR deficiencies as a result of inventory sourcing decisions will be assessed against stocks within DLA and other sources of supply using risk analysis planning factors. The risk analysis will be informed by DLA inventory, existing contracts with the industrial base, other sources of supply, and estimated demand from other competing Services. It provides a by-item risk category and a risk score to account for variables such as quantity, price, and lead-time.

(2) Risk Mitigation. RM will be conducted on each item identified as high-risk to the Service or Operating forces. The RM OPT will review the prioritization of deficiencies and will identify whether to procure additional inventory, optimize positioning, reposition existing inventory, or accept risk. Accepting risk includes deferring procurement until the item is required and establishing methods and processes for timely and responsive delivery. RM for Service WMR deficiencies include increasing the WRP AAO and reviewing existing WRM Support Plans in support of OPLANs/CONPLANs (e.g.,

updating the Class I Performance Based Agreement (PBA) with DLA, inter-service support agreements, host-nation agreements, etc.). Appendix C provides a risk matrix reflecting considerations for risk analysis and mitigation across each class of supply.

d. Service Investment Strategies

(1) The output of the RM OPT becomes the basis for the WRM Support Plans that include a prioritized list of Class II/VII recommended Service investments (i.e., procurement and acquisition) in high risk, long lead-time production items. HQMC I&L (LPO) will coordinate the adjudication of the WRM Support Plan through the PEB and POM process, and the USMC Capabilities Based Assessment (MC CBA) if required.

(a) ME (Stores Account Code [SAC] 3). ME investments will be adjudicated through appropriate PEB and POM processes by CD&I.

(b) Consumables (Combat Essentiality Code [CEC] 5 or 6). Investments for consumables will be prioritized against available funding and included as high-risk WRMR deficiencies in the Sustainment PEB POM.

(2) Once procured, Service WRM will be positioned to best support OPLAN/CONPLAN requirements. MCPN stakeholders will participate in the risk assessment and mitigation process and will inform the positioning decision and subsequent impacts on prepositioning objectives (PO), the Long-Term Storage (LTS) program, and Care of Supplies in Storage (COSIS) programs.

5. Operational-Level Materiel Risk Management

a. Determining Operational WRMR

(1) Operational WRMR calculations are conducted to inform Strategic Lift/TPFDD requirements, PWRM positioning and sourcing options, update WRM Support Plans (e.g., DLA requisitions, ISSA, HNS, etc.) and develop mitigation strategies for each OPLAN/CONPLAN, as required.

(2) To support the above objectives, the following planning factors are used to establish the OPLAN/CONPLAN WMR and WRM requirements:

(a) Operational Class II/VII WRMR is calculated against the forces identified in the plan for a period of 60 days for a MEB and 30 days for a MEF.

(b) Force deployment is used for Operational WMR/WRMR calculations to increase requirements accuracy and determine delivery dates.

(c) Geographical locations are used to assess supply chain analysis and inform the risk assessments.

(d) The CARF is used to calculate the CRR for Operational Class II/VII WRMR in 30-day increments.

(e) Climate condition used for the OPLAN/CONPLAN (e.g., Extreme Hot, Hot, Cold, and Extreme Cold) is determined by the supported regional MARFOR.

(f) Historical usage data is retrieved from GCSS-MC or provided by the lead MEF/Marine Logistics Group (MLG) supporting the OPLAN/CONPLAN.

(3) Planning factors and assumptions are provided by the supported regional MARFOR to MARCORLOGCOM and used in the current WR AIS to calculate the Operational WMR/WRMR and to develop sourcing and sequencing options that support the OPLAN/CONPLAN concept of deployment and employment.

b. Sourcing Operational WRMR

(1) Sourcing solutions are developed to match existing inventory to the WRMR. The methodology for sourcing the Operational WRMR is informed by the concept of operations, unit availability, and operational guidance provided by HQMC (PP&O) and FMF/MARFOR Commanders.

(2) Sourcing WRMR methods and processes are specific to class of supply (see Chapter 3). In general, the sourcing priority for Operational level WRMR is Operating Stocks (T/E and accompanying supplies), prepositioned stocks, MARCORLOGCOM in-stores, redistribution between MEFs, enterprise global sourcing, DLA, and JLEnt.

(3) WRMR deficiencies are identified by MARCORLOGCOM using the WR AIS to source WRMR against existing inventory. The resulting deficiencies are validated by the sourcing OPT. Participants in the sourcing OPT include the FMFs/MARFORs, I&L, PP&O, and MARCORLOGCOM. Sourcing OPT considerations include:

- (a) Validation of planning factors
- (b) Sourcing origination
- (c) Risk from possible cross-MEF sourcing options
- (d) MEF Operating stock levels
- (e) Stocks available through Naval Logistics Integration
- (f) Prepositioned inventory
- (g) Common item support from other Service inventory
- (h) LFORM
- (i) HNS
- (j) OPLAN/CONPLAN supported regional MARFOR and GCC RDD

(4) The output from the Operational Sourcing OPT is a validated list of WRMR deficiencies that are unsourced from sourcing options inventory identified. These deficiencies will undergo a risk analysis to determine criticality and a mitigation strategy to determine ability to source and/or position to meet OPLAN/CONPLAN supported regional MARFOR and GCC RDDs. Once sourced, these solutions will be updated to the TPFDD.

c. Operational Level Risk Assessment. Risk assessments include risk analysis and RM, and are conducted for each WRMR deficiency to determine if enterprise inventory is available, the criticality of the item and if

maintaining it as a materiel deficiency is acceptable risk to the Service based on the mitigation strategy(ies) to meet RDDs. If the materiel deficiency is determined to be an unacceptable risk, the mitigation strategy will be to procure the item and maintain as Service retained WRM positioned to best support existing OPLANS/CONPLANS.

(1) Risk Analysis. Similar to the Service-level RM OPT, the Operational RM OPT will use the WMR/WRMR sourcing deficiencies to assess DLA's inventory and existing contracts with the industrial base, other sources of supply, and estimated demand from other Services competing for common item support, to inform the risk assessment. Risk will be measured by available inventory and contract responsiveness. A risk score will be assigned based on several variables such as quantity, price, and lead time. Additional risk factors that impact the risk scoring include, but are not limited to: Criticality (CEC 1 or 5), failure rate, procurement lead time, production lead time, supply chain vulnerability, existing DLA contracts, current availability, current readiness, DoD industrial base redundancy.

(2) Risk Mitigation. RM will be validated during the Operational RM OPT, which includes participants from the FMFs/MARFORs, I&L, PP&O, P&R, MARCORLOGCOM and MARCORSYSCOM. The RM OPT will review the prioritization of WMR/WRMR deficiencies and identify whether to procure additional inventory, optimize positioning, reposition existing inventory, or accept risk. Accepting risk includes deferring procurement until the item is required and establishing methods and processes for timely and responsive delivery. RM for Operational level WRM strategies may also include establishing WRM Support Plans (i.e., updating the Class I PBA with DLA, inter-service support agreements, HNS agreements, forecasting requirements to DLA during the annual DLA data call, etc.).

d. Operational WRMR Investment Strategies

(1) The output of the Operational RM OPT is a WRM Support Plan for each OPLAN/CONPLAN reviewed, and will include an approved, prioritized WRMR deficiency list and identification of recommended Operational level investments (i.e., procurement and acquisition) in high risk, long lead time production items. Due to the time sensitive nature of OPLAN/CONPLAN support, investment strategies may not be adjudicated through the normal PEB and POM process. Accelerated acquisition for WRM Support Plans may be coordinated with MARCORSYSCOM for USMC-specific deficiency investments. WRM Support Plans may also provide specific requirements to the Joint Staff Directorate for Logistics (J-4) for adjudication through the Joint Materiel Priorities and Allocation Board (JMPAB).

(a) ME (SAC 3). ME investments will be adjudicated through appropriate PEB and POM process by CD&I, or candidates for accelerated acquisition may be supported by supplemental funding.

(b) Consumables. Investments in consumables will be prioritized against CEC and available funding. They may be included as high-risk WRMR deficiencies, supported by supplemental funding for immediate procurement, or included in the appropriate PEB or POM process.

(2) Once procured, WRM will be positioned to best support OPLAN/CONPLAN requirements. MCPN stakeholders will participate in the Operational-level Sourcing and RM OPTs and will inform the positioning decision, and subsequent impacts on PO, LTS and COSIS programs.

## Chapter 3

### Classes of Supply

1. Introduction. WMR includes all classes of supply, however, the main focus of this policy is limited to the following ground supply materiel Classes: I (Subsistence); II (Individual Equipment and General Supplies); III(Packaged); IV (Construction Material); VI (Personal Demand Items); VII (ME); and IX (Repair Parts & Batteries).

2. Purpose. The purpose of this chapter is to address each class of supply and identify mitigation strategies and options that minimize procurement of Service-held WRM while maintaining or improving responsiveness to the operating forces.

3. Overview. Each WMR/WRMR deficiency will undergo a risk assessment to determine optimal mitigation to meet RDD. There may be multiple mitigation strategies for the same item to meet total demand, while minimizing the need to maintain inventory above operating or prepositioning stocks, balanced against responsiveness. Each class of supply identified below will explore the options for mitigating WMR/WRMR deficiencies.

#### 4. Classes of Supply

a. Class I (Subsistence). Class I WRMR calculates only operational rations which include Meals Ready to Eat (MRE) and Unitized Group Rations (UGR). Water requirements are calculated by the WR AIS for planning purposed only.

(1) Requirements for Class I WRMR for rations and water is calculated within the WR AIS based on POS, approved force list, EPW plan, environment, planned mobilization support requirements, and feed plan. Sourcing for rations includes basic load prescribed by the MEF commander, rations in the prepositioning programs, DLA supplied operational rations to the Marine Corps at strategic locations per the performance based agreements (PBA), and FMF-managed LFORM stocks.

(2) RM for deficiencies in operational rations include coordinating with the regional MARFOR DLA Warfighter Support Representative (WSR) to adjust or accelerate operational ration availability under the existing PBA, coordinating with the other Services to accelerate ISSAs, or obtaining suitable substitutes from HNS or Navy Combat Logistics Fleet (CLF) inventory. Proactive long-term RM strategies include increasing PWRM quantities or adjusting quantities and locations under the PBA.

b. Class II (Clothing, Individual Equipment, Tools, Administrative Supplies). Class II consists of individual combat clothing and equipment (ICCE), tents, organizational tool sets, tool kits, hand tools, and administrative and housekeeping supplies and equipment. Class II WRMR primarily consists of ICCE, Special Training Allowance Pool (STAP), and soft-walled shelters and camouflage netting (SWS&CN). For purposes of this Order, Class II general supply, tools and administrative supplies that are not individual issue items will be calculated like Class VII ME.

(1) Requirements for Class II are calculated by the WR AIS based on the POS, force list, environment, and tariff sizes (when applicable). CEC 1 End Items for Class II requirements are calculated by applying the assigned

replacement factor (CARF or other factor) against the approved force list. Class II individual items are warehoused by MARCORLOGCOM through the Consolidated Storage Program (CSP) and inventory is provided to the Fleet via Individual Issue Facilities (IIFs) for ICCE, and Unit Issue Facilities (UIFs) for STAP (cold weather, extreme cold weather) and associated tenting.

(2) RM strategies for Class II deficiencies include redistributing existing CSP inventory to better meet RDDs and increasing production through accelerated or contingency contracts between MARCORSYSCOM and the industrial base, or suitable commercial off-the-shelf (COTS) items. The CSP issues equipment at the MEF's discretion and based on requirements during a contingency. Long-term mitigation strategies are determined by the MARFORs and include increasing inventory warehoused by the CSP and increasing accuracy of tariff sizing data to improve inventory estimates.

c. Class III Packaged (P) POL. Class III(P) consists of: POLs; hydraulic and insulating oils; preservatives; liquid and compressed gases; bulk chemical products; coolants; and deicing and antifreeze compounds. This does not include bulk ground nor aviation fuels.

(1) Requirements for Class III(P) are calculated for packaged POL by the WR AIS and are based on the T/E or EDL, maintenance intervals, environmental factors, and consumption rates. Class III (P) calculated requirements are for planning purposes to forecast demand at the time of OPLAN/CONPLAN execution.

(2) RM for Class III (P) deficiencies includes registering Class III(P) WRMR deficiencies with DLA - Defense Energy Supply Center (DESC), use of Navy CLF inventory, and coordination with DESC and the regional MARFOR DLA warfighter support representative (WSR) for HNS. Long-term mitigation strategies include increasing Class III(P) inventory in prepositioning and LFORM and improving the accuracy of captured FMF/MARFOR Class III(P) demand history.

d. Class IV (Construction Material). Class IV consists of lumber, field fortification, and construction materiel (e.g., bridging material, barbed wire, bunkering materiel, hardening of defensive positions, etc.).

(1) Requirements for Class IV are calculated by WR AIS or other construction AIS and are based on the stock level determined by the FMF/MARFOR for missions within a given OPLAN or CONPLAN, T/E or EDL, and the POS. Limited quantities of field fortification materiel are held by MARCORLOGCOM. DLA's Defense Supply Center Columbus (DSCC) is responsible for the purchase and delivery of Class IV per the timeframes established for each OPLAN/CONPLAN.

(2) RM for Class IV deficiencies include coordinating with FMF/MARFOR contingency contracting or DLA WSR for HNS. Long-term mitigation strategies include increasing Class IV inventory within the MCPN and on LFORM, refining the accuracy of capturing Class IV usage by the FMF/MARFOR, and including Joint Construction Management policy in the requirements determination process.

e. Class V (Munitions)

(1) Class V(W) (Ground Munitions) is addressed in MCO 8001.

(2) Class V(A) (Aviation Ordnance) is addressed in OPNAVINST 8000.16.

f. Class VI (Personal Demand Items). Class VI consists of gratuitous issue of health and comfort packages (HCP) such as male and female personal hygiene items.

(1) Requirements for Class VI are calculated based on the POS, approved force list (broken down by male and female), and the EPW plan to determine anticipated demand during execution of an OPLAN/CONPLAN. Forces normally deploy with 30 DOS of personal items therefore Class VI requirements calculations begin at day 31. DLA Troop Support at Defense Supply Center Philadelphia (DSCP) requisitions and releases Class VI items to units based on the force requirement location and RDD. DSCP contracts the production of HCPs; therefore, large quantity requisitions such as for OPLAN execution should be preregistered with DLA.

(2) RM for Class VI deficiencies includes coordinating with FMF/MARFOR contingency contracting or with the DLA WSR for HNS. Long-term mitigation strategies include submitting accurate registration for HCPs to DLA DSCP.

g. Class VII (Major End Items). Class VII consists of CEC 1 and final combinations of end products that are ready for their intended use (e.g., launchers, trucks, mobile machine shops, radios, engineer equipment, and vehicles).

(1) Requirements for Class VII combat losses are calculated in the WR AIS by applying the CARF against the total TAMCN quantity to determine the CRR by POS. CRRs for SAC-3, CEC 1 are promulgated annually in reference (h). Procurement of Class VII to fill combat losses factor in availability of MCPN and FMF equipment in-stores at home stations or held by MARCORLOGCOM and are registered as part of the WRP element of the AAO (e.g., MCPN, WRMR-I and FMF equipment in-stores).

(2) Due to the unique management and long production lead-time of Class VII ME, RM for Class VII deficiencies includes both WMR and WRMR deficiencies. WMR deficiencies are the result of T/E deficiencies due to unfunded AAOs and dead lined equipment not available for deployment, including not RFI held in WRMR-I. RM for Class VII WRMR deficiencies occurs after global enterprise sourcing (cross-MEF redistribution, remain behind equipment [RBE], etc.). RM may include increased funding for MARCORLOGCOM depot repairs, coordination with MARCORSYSCOM for accelerated production under contingency contracts, or accelerated procurement of COTS suitable substitutes available by the RDD from the industrial base. Long-term mitigation strategies include increases to the WRP AAO through the POM process or redistribution of the AAO. Any Cl VII RM strategy must also account for significant increases in technological complexity of weapons systems facing the Service in the 21<sup>st</sup> Century. Complex systems such as long-range precision weapons, unmanned systems, and incorporation of artificial intelligence will demand intensive coordination between equipment specialists, integrated material managers, and management of the WR program.

h. Class VIII (Medical Materials). Class VIII consists of medical consumables, equipment, and associated materiel (to include medical repair parts and test equipment). MARCORSYSCOM manages Class VIII under the Medical Logistics Program and coordinates with the MARFORs to fulfill the Marine Corps capability equivalent to 60 DOS.

(1) The requirement for Class VIII medical logistics assemblages (Authorized Medical Allowance Lists [AMAL] and Authorized Dental Allowance Lists [ADAL]) are based on assigned CARF rates. MARCORSYSCOM provides the WRMR shortfall dollar amount to CD&I for budget submission.

(2) Class VIII consumables are not computed as WRMR in the Marine Corps. The 60 DOS capability is based on Naval Health Research Center modeling used to simulate medical surges by patient quantity and type.

i. Class IX (Repair Parts). Class IX consists of repair parts (repairable and non-repairable) and components including kits, assemblies, sub-assemblies, and dry cell batteries required for maintenance support of ground equipment.

(1) Requirements for Class IX are calculated by the WR AIS based on POS, T/E or EDL, environment, historical usage, demand data, provisioning data, and deployment data from established AIS repositories.

(2) RM for Class IX deficiencies includes coordination with FMF/MARFOR contingency contracting for open purchases, HNS, procurement of suitable substitutes, inventory from Navy CLF and additive manufacturing. Long-term RM strategies include increasing requisitioning objectives for MEF-held combat critical Class IX and refining the accuracy of historical demand data.

j. Class X (Material for Nonmilitary Programs). Class X consists of items to support non-standard military operations such as agriculture and economic development and do not meet criteria as WRM.



## Chapter 4

### War Reserve Materiel Execution

1. Introduction. HQMC (PP&O/I&L/P&R) must authorize withdrawal of WRM as approval may involve the use of PWRM, release of un-programmed funding, global sourcing, and operational prioritization.

2. Purpose. The purpose of this chapter is to identify the methods, processes, and procedures to request, approve, release, and distribute WRM to the OPFOR deploying in support of combat operations that require Service-held WRM.

3. Overview. Being ready when the Nation is least ready requires continuous and deliberate planning for the deployment of forces ISO combat operations. The WRP construct outlined in this Order assists in the deliberate planning process for determining materiel requirements and identifying WRMR deficiencies to put in place mitigating actions that maximize the availability of critical resources when and where needed.

4. Request for PWRM. In accordance with reference (c), the supported regional MARFOR requiring PWRM will follow GCC procedures for requesting PWRM. Requests will be submitted by the Combatant Command to the Joint Staff who in-turn will notify HQMC (PP&O, I&L and P&R) for approval.

5. Release of WRM. The supported MARFOR initiates coordination with HQMC I&L (LPO-2), PP&O, P&R, and MARCORLOGCOM to identify if a specific commodity or the entire WRM support plan needs to be activated. A WRM support plan is developed for each OPLAN/CONPLAN and includes releasing pre-determined requisitions to DLA, initiating contingency contracts, and/or activating inter-service support agreements to begin the movement of materiel to the desired geo-location.

#### 6. Distribution of WRM

a. MARCORLOGCOM-held WRM stocks. MARCORLOGCOM is responsible for physical preparation and movement of WRM from in-stores locations to the designated sea/aerial port of embarkation (S/APOE) in accordance with the OPLAN /CONPLAN TPFDD.

b. DLA (and other source of supply) inventory. MARCORLOGCOM will release predetermined requisitions via GCSS-MC to meet planned WRM requirements. WRM inventory from DLA will be delivered to either the designated sea/aerial port of debarkation (S/APOD) or DoD activity address code (DoDAAC) via the TPFDD process (TPFDD requirements for DLA are registered by MARCORLOGCOM; however, DLA tracks shipments via Transportation Control Number [TCN] vice unit line number [ULN]).

7. TPFDD considerations. MARCORLOGCOM WRM TPFDD will be populated and sourced with ULN for each supported unit, during the required TPFDD conferences. These WRM ULN requirements will be included in the OPLAN/CONPLAN TPFDD to source the expeditious movement of WRM when needed.

## Chapter 5

### Combat Active Replacement Factor (CARF)

1. Introduction. The Combat Active Replacement Factor (CARF) value reflected in TFSMS is critical in forecasting combat losses for class II/VII and determining WRM requirements (WRMR) for Combat Essential Code (CEC) 1 Class II and Class VII ME, and Class VIII medical logistics assemblages.
2. Purpose. The CARF is used to calculate the expected attrition of a given Class II/VII Table of Authorized Control Number (TAMCN) end items over a specified period of time and combat intensity. The attrition rate estimates the number of ME by TAMCN needed to keep the forces at their T/E when engaged in combat. The CARF reflects the proportion of a given TAMCN expected to be lost during a period of support at a given combat intensity.
3. Overview. HQMC I&L (LPO) makes CARF recommendations for each Class II/VII item (Type 1, CEC 1, SAC 3). Once adjudicated and approved through the reference (h) staffing process, HQMC I&L (LPO) submits applicable TOECRs into TFSMS.
4. CARF Assignment. Depending on the type of equipment and the existence of observed losses for a given variant of equipment, the CARF assignment was developed using a CARF algorithm that assigns a CARF value using previous study results, explicit calculation from observed losses, or recursive partitioning.
  - a. Chemical, Biological, Radioactive, and Nuclear Defense Equipment (CBRND-E). CARF values are assigned to CBRND-E hazardous material protective equipment using the results of the Joint Chemical and Biological Expendable Equipment Combat Consumption Rates Study (E2C2).
  - b. Explicitly Calculated CARF (ECC). ECC values are assigned to non-CBRND-E equipment with recorded combat losses from recent conflicts. These values are assigned by calculating the proportion of permanently lost equipment to total deployed equipment on a monthly basis.
  - c. Recursive Partitioning CARF (RPC). Recursive partitioning is a scientific approach using decision trees to classify an item by various fields (e.g., size, weight, supply class, supply group), enabling the prediction what those values would be based on known historical values for similar or like items. This process is used to assign CARF values to National Stock Numbers (NSN) with no observed loss. The recursive partitioning results in models that yield CARF values on an NSN basis.
  - d. Linear Projection. Linear Projection is used when CARF values cannot be based on recent conflicts and extrapolates data based on conflicts for which CARF data does exist.
5. CARF Statistical Analysis Tool (CARF-STAT). These assignment rules have been developed in a tool called CARF-STAT. CARF-STAT provides HQMC I&L (LPO) with an enduring capability to update CARF value predictions as equipment evolves and new observations are annotated on combat losses.
6. Application
  - a. CARF Values. Each TAMCN requiring CRR calculation, has nine CARFs

established and recorded in TFSMS: There are (3) conflict intensities - Light Infantry Threat (LIT), Infantry Heavy Threat (IHT) and Armor Heavy Threat (AHT) with each intensity level having an Assault and Sustainment CARF. In addition to the intensity levels, there is a Weighted Average for Assault and Sustainment along with a Peacetime CARF established for administrative purposes and are not applicable to WRP calculations.

b. Calculation of CRR. CARF values are recorded in the WR AIS to establish the WRMR AAO and compute OPLAN sustainment requirements. CARFs are applied to the approved T/E or EDL for both Service level and OPLAN/CONPLAN calculations. The result is the Combat Replacement Requirement. This CRR is reported to the enterprise annually in reference (h) which informs the CD&I Capabilities Integration Officers (CIO) in development of the AAO and avoids negative impacts of overinflating AAOs that may impose undue fiscal burdens upon the Service.

## Chapter 6

### Integrated Materiel Analysis

1. Introduction. The legacy War Reserve System (WRS) historically used to support Cold War era operational and strategic level planning, since developed in 1972, will be replaced with an Integrated Materiel Analysis Toolset (IMAT) in a cloud-based environment. IMAT will enable analysis of one or multiple classes of supply at the same time. IMAT will standardize the methods for requirements determination and will use Authoritative System of Record (ASR) data to inform sourcing, and planning factors along with operational variables to conduct material risk management. IMAT is intended to support multiple levels of logistics planning and keep aligned to future force structure.

2. Purpose. The purpose of this chapter is to provide an overview of IMAT capabilities and functions that will support service, operational, and exercise level planning by class of supply in support of the war reserve program.

3. Overview. The goal of IMAT is to enable risk informed investment decisions in support of Service level WRMR deficiencies, operational assessments, and exercise support. To accomplish this goal, IMAT is being developed to support an integrated approach to materiel analysis that supports logistic planning at the operational and tactical levels. IMAT will support the following functionality:

a. A risk assessment methodology that considers a myriad of planning factors, sourcing options, and mitigation strategies to forecast requirements, deficiencies, and materiel investment recommendations for classes of supply identified in this Order.

b. The ability to plan for requirements, identify sourcing options, identify shortfalls, and how to assess the risk of those shortfalls.

c. A variety of options to support "what-if" analysis to reduce risk and provide a forecasted requirement for operational planning.

d. Analytical rigor with a transparent methodology to support a myriad of logistics planning considerations.

#### 4. Functional Capability

##### a. Requirements Determination

(1) To support requirements determination, IMAT will use established logistics planning factors based on a "best of breed" approach by class of supply. These requirements calculations will factor in units selected, total force, time constraints, number of personnel, locations, etc. to provide the most accurate answer to the planner.

(2) There are generally two different approaches to determine requirements for each class of supply.

(a) Population Based. Population based calculations use unit forces and there existing or modified Table of Organization data, total force, climate, and duration to determine requirements:

1. Class I (Subsistence and Water). Will include enemy prisoners of war numbers and can be modified by the type of environment, climate, and the level of sustainment needed.

2. Class II(T) (Individual Equipment). Population based and will use tariff sizes for Class II(T) and can be modified by the type of environment and climate.

3. Class VI (Personal Demand Items). Calculations will use Male/Female population estimates.

4. Class IV (Construction Material). Will support camp operations (water, power, shelter, etc.) and mobile defense based on the size of the unit and informed by Engineering AIS.

(b) Equipment Based. Equipment based requirements calculations will use unit T/E or a modified T/E as an EDL.

1. Class II, VII & VIII - T/E (non-Tariff items). Informed by CARF factors identified in TFSMS.

2. Class III(P). Informed by maintenance intervals, environmental factors, and consumption rates.

3. Class IX. Repair parts, batteries, and SECREPs are informed by environment, historical usage, demand data, provisioning data, and deployment data from established AIS repositories. Although all are Class IX, consumable repair parts, secondary repairables and batteries have different algorithms and will be calculated separately in the current WR AIS.

b. Sourcing Analysis

(1) Sourcing to requirements will be identified from a regional perspective to allow planners to determine which sources will be available to specific units by location. Each class of supply can have multiple location options.

(2) Primary sources for consideration include the following:

(a) MCPN

(1) MPF. Broken down by individual MPF ships, the planner can select any number of ships, the regions they are assigned to, and when available.

(2) Ashore Prepositioning. Select or create other prepositioning capabilities, the regions they are assigned to, and when available.

(b) LFORM. The planner will select up to six MEU amphibious ships, the regions they are assigned to, and when they are available.

(c) Supporting Commander Accompanying Supplies. Supporting Commanders will bring supplies (to include those held under stockage agreements with DLA) and equipment with them and the calculator will be flexible enough to accommodate a variety of different computational

techniques by class of supply.

(d) MARCORLOGCOM in-stores inventory

(e) Contract/Host-Nation Support. The planner will identify additional sources of supply to provide flexible sourcing capabilities.

(f) FMF T/E

(3) Sourcing Sequence

(a) Sourcing sequence by regional location is essential for logistics planning and planners will have the capability to choose which sources will be used first for any given region for each class of supply. This will enable a logical flow of sources that can be custom tailored to meet the operational plan requirements.

(b) Based upon each source's availability day, a default sourcing sequence will be generated by class of supply. The default sourcing order can also be adjusted by the planner.

(4) Shortfall Analysis

(a) Once the sourcing sequence is finalized, the IMAT will run to determine the shortfall based on the parameters entered by the planner. Sources will be matched with requirements; for deficient items, a shortfall will be generated. These shortfalls can be calculated by region, by MEF, and by POS to provide a detailed analysis of where there are excesses and gaps.

(b) Sourcing sequences and options will also be adjusted to include or exclude various sourcing options to provide a "what if" capability that can match operational guidance on what sources are available and what sources are not.

c. Risk

(1) Although risk is a focus throughout the entire process, shortfall identification of equipment and supplies is the first step in identifying risk and begins the MRM outlined in Chapter 2.

(2) IMAT will enable the process of MRM and allow decision makers to explore choices for investment. Depending upon the situation, sometimes this could mean investment in prepositioned stocks to reduce risk in quantity or time available. In other situations, the service may accept risk and rely on other sources (like DLA) to provide the supplies needed in time.

d. Registration

(1) Registration of Supplies

(a) DLA is a core supplier of parts and supplies to the Marine Corps. As part of an annual data call process, the IMAT will calculate the WRM needed from DLA and other sources of supply.

(b) Other sources include other services or contract support. WRM deficiencies will also be registered with the Primary Inventory Control Activity (PICA) / Secondary Inventory Control Activity (SICA) for any NIIN

level item.

(2) Registration of Distribution. Once the OPLAN is in place, the registration of the distribution through the TPFDD process will need to be generated.

e. Execution

(1) IMAT is not only an analysis tool but will also provide transactional level data by sending transactions to other AIS to initiate the war reserve surge capability to start sending parts and supplies forward to meet the Combatant Commander's needs. IMAT will not use traditional point-to-point interfaces for data integration. These interfaces have proven to be unsustainable for maintenance upkeep and data validation. IMAT will embrace USMC efforts for enterprise cloud-based solutions and use the Logistics Data Services (LDS) platform. For transactional data, IMAT will use established Defense Logistics Management Services (DLMS) transactions for execution capabilities supporting requisitions, registration, and material releases.

(2) Execution will be accomplished from a whole plan perspective or specific commodities. For each contingency, the IMAT will facilitate the planner's ability to update the plan before requesting the execution of the withdrawal plan.

f. Reports/Dashboards

(1) IMAT will generate a variety of analytical reports that will update a dynamic dashboard. Presenting the data results in an intuitive dashboard will be a key feature in communicating what is required, how it will be sourced, where are the gaps, and what is the risk by class of supply.

(2) Drill down capabilities will exist to see in detail by day, by unit, by MEF, by location, by region and provide all the statistics and data needed for planners. This will include not just quantities, but also cost, lift requirements measured in terms of pallets, containers, short tons, etc.

5. Conclusion. IMAT will provide a modernized planning capability in a single platform that enables integrated planning across the FMF for multiple scenarios. IMAT will match current business rules at the service and joint level but be flexible enough to accommodate future changes to force structure and business practices. IMAT will be accessible through a CAC enabled web-based interface with specific permissions assigned.

APPENDIX A

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AAO	Approved Acquisition Objective
ADAL	Authorized Dental Allowance List
AFOE	Assault Follow-on Echelon
AIS	Automated Information System
AMAL	Authorized Medical Allowance List
ATO	Authority to Operate
CARF	Combat Active Replacement Factor
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosives
CCDR	Combatant Commander
CEC	Combat Essentiality Code
CLF	Combat Logistics Fleet
CONPLAN	Concept Plan
COSIS	Care Of Supplies In Stores
COTS	Commercial Off-the-Shelf
CRR	Combat Replacement Requirement
DC AVN	Deputy Commandant, Aviation
DC CD&I	Deputy Commandant, Combat Development and Integration
DC I&L	Deputy Commandant, Installations and Logistics
DC PP&O	Deputy Commandant, Plans, Policies, and Operations
DC P&R	Deputy Commandant, Programs and Resources
DESC	Defense Energy Supply Center
DLA	Defense Logistics Agency
DLMS	Defense Logistics Management Services
DoD	Department of Defense
DoDAAC	Department of Defense Activity Address Code
DOS	Days of Supply
DSCC	Defense Supply Center Columbus
DSCP	Defense Supply Center Philadelphia
EDL	Equipment Density List
EPW	Enemy Prisoner of War
FYDP	Future Years Defense Plan
GCC	Geographical Combatant Commander
GPMCWG	Global Prepositioned Materiel Capabilities Working Group
HCP	Health and Comfort Packages
HNS	Host-Nation Support
HQMC	Headquarters Marine Corps
IIP	Initial Issue Provisioning
IMAT	Integrated Materiel Analysis Tool
IMM	Integrated Materiel Management
ISL	Inventory Stockage Levels
JLEnt	Joint Logistics Enterprise
LDS	Logistics Data Services
LFORM	Landing Force Operational Reserve Materiel
LTS	Long-term Storage
MAGTF	Marine Air Ground Task Force
MAP-K	Marine Expeditionary Unit Augmentation Program Kuwait



MARCORLOGCOM	Marine Corps Logistics Command
MARCORSYSCOM	Marine Corps Systems Command
MARFOR	Marine Forces
MARFORRES	Marine Forces Reserve
MC CBA	Marine Corps Capabilities Based Assessment
MCPN	Marine Corps Prepositioning Network
MCPPP-N	Marine Corps Prepositioning Program - Norway
ME	Military Equipment
MEB	Marine Expeditionary Brigade
MEDLOGCO	Medical Logistics Company
MEF	Marine Expeditionary Force
MPF	Maritime Prepositioning Force
MPSRON	Maritime Prepositioning Force Squadron
MRA	Materiel Risk Assessment
MRE	Meal Ready to Eat
MRM	Materiel Risk Management
MROC	Marine Requirements Oversight Council
NECC	Naval Expeditionary Combat Command
NNOR	Non-nuclear Ordnance Requirement
OPLAN	Operational Plan
OPSTOCK	Operating Stock
OSD	Office of the Secretary of Defense
PBA	Performance Based Agreement
PEB	Program Evaluation Board
PM	Program Manager
POL	Petroleum, Oils, and Lubricants
POM	Program Objective Memorandum
POS	Period of Support
PPBEA	Planning, Programming, Budgeting, Execution and Assessments
PWRM	Prepositioned War Reserve Materiel
RBE	Remain Behind Equipment
RDD	Required Delivery Date
RM	Risk Mitigation
ROMO	Range of Military Operations
SAC	Stores Account Code
S/APOD	Sea/Aerial Port of Debarkation
S/APOE	Sea/Aerial Port of Embarkation
SE	Supporting Establishment
STAP	Special Training Allowance Pool
SUSPEB	Sustainment Program Evaluation Board
T/A	Training Allowance
TAMCN	Table of Authorized Materiel Control Number
T/E	Table of Equipment
T/M/S	Type, Model, and Series
TFSMS	Total Force Structure Management System
TMR	Total Munitions Requirement
TPFDD	Time-Phased Force and Deployment Data
UGR	Unitized Group Ration
ULN	Unit Line Numbers

USTRANSCOM	United States Transportation Command
WMR	War Materiel Requirement
WRM	War Reserve Materiel
WRMR	War Reserve Materiel Requirement
WRMR-I	War Reserve Materiel Requirement In-stores
WRMSF MARSO	War Reserve Materiel Stocks Force-Held Marine Ammunition Requirement Support Order
WRP	War Reserve Program
WRWP	War Reserve Materiel Withdrawal Plan
WSR	Warfighter Support Representative

APPENDIX B

GLOSSARY OF TERMS AND DEFINITIONS

The following terms and their definitions are for the purpose of this order:

1. Approved Acquisition Objective (AAO). The quantity of an item authorized for Marine Corps peacetime and wartime requirements to equip and sustain the Marine Corps per current DoD policies and plans. The aggregation of all Table of Equipment (T/E) requirements associated with each Unit Identification Code (UIC) for a given TAMCN make up the Total Marine Corps AAO for that TAMCN.

2. Authorized Dental Allowance List (ADAL). A listing of the minimum types and quantities of equipment required to establish a specific dental care function (e.g., dental operatory/dental clinic) combined with the list of consumable supplies that are required to support a predetermined patient care load associated with the dental care function.

3. Allowance. A quantity of materiel authorized for an activity or unit and validated by the MARFOR or DC CD&I to accomplish their mission.

4. Authorized Medical Allowance List (AMAL). A listing of the minimum types and quantities of equipment required to establish a specific health care function (e.g., an operating room) under combat/deployed conditions.

5. Care of Supplies In Storage (COSIS). A process by which supplies and equipment in storage are maintained in ready-for-issue condition, including inventory management, quality control, exercise of applicable materiel, and performance of corrective actions on materials found deficient by inspection. (DoD 4100.39-M Vol 10)

6. Combat Active Replacement Factor (CARF). The CARF is a calculated attrition rate for end items (Class II and VII) over a specified period of time based on combat intensity. The CARF rate is represented as a percentage applied against the T/E.

7. Combat Replacement Requirement (CRR). The CRR is the additional warfighting assets required to keep forces at their T/E level in the event assets are destroyed or lost in an operation or contingency, and is determined by applying the CARF rate to the quantity of each end item on the T/E.

8. Common Item. Any item of materiel that is required for use by more than one activity. Sometimes loosely used to denote any consumable item except repair parts or other technical items. Any item of materiel that is procured for, owned by (Service stock), or used by any Military Department and is also required to be provided to a recipient country under the grant-aid Military Assistance Program. Also included are readily available commercial items; items used by two or more Military Services of similar manufacture or fabrication that may vary between the Services as to color or shape, such as vehicles or clothing; and any part or component that is required in the assembly of two or more complete end-items.

9. Consumable. A non-repairable secondary item.

10. D-Day. The unnamed day on which a particular operation commences or is

to commence. (JP 3-02)

11. Days of Supply (DOS). A period of time adopted as a standard of measurement, used in estimating the average daily expenditure under stated conditions. It may also be expressed in terms of the number of days to compute 30 days of subsistence broken out in increments. The quantity of a MEF's equipment and supplies, in either its accompanying supplies or resupply, which is estimated to sustain that force for a single a period of time used to support a projected scenario/threat.

12. Employment. Operation plans, operational orders, or contingency plans identify allocation of assets, such as PWRM, and authority to employ assets.

13. End Item. A final combination of end products, component parts, or materials that is ready for its intended use.

14. Initial Issue. The provision of materiel approved for issue and not previously supplied to an individual or an organization such as those to support new inductees, newly activated organizations, and issues of newly standardized items. Also included are forced issues of repair parts to an organization in support of newly provisioned end items. The WR Program calculates Class II ICE for initial issue requirements for MARFORRES and, as required, the Active Force Initial Issue STAP.

15. Initial Provisioning. The process that establishes the range and quantity of initial support items required to support an end item for that period of time which extends from placing the end item in service until full responsibility for support can be assumed by the supply system through routine replenishment.

16. Integrated Materiel Management (IMM). The exercise of total DoD management responsibility for a Federal supply group/class commodity or item by a single agency, which normally includes computation of requirements, funding, budgeting, storing, issuing, cataloging, standardizing, and procuring functions. (JP 4-09)

17. Landing Force Operational Reserve Materiel (LFORM). Package of contingency supplies pre-positioned and maintained onboard selected amphibious warfare ships to enhance reaction time and provide support for the embarked landing force in contingencies. (JP 3-02)

18. Long Term Storage (LTS). LTS is the portion of a selected unit T/E quantity that is held in enterprise level storage programs such as MCPN, WRMR-I or other storage. (MCO 5311.1E)

19. Maritime Prepositioning Force (MPF). The MPF is composed of 12 ships; two squadrons of six vessels. Each squadron is supported by an Expeditionary Transfer Dock Vessel (ESD), to enhance in-stream offloads. The ESDs do not carry USMC equipment. Each maritime prepositioning ships squadron (MPSRON) carries a majority of the equipment and 30 DOS to support a 17,000 person MAGTF including its Naval support elements.

20. Materiel. All items necessary to equip, operate, maintain, and support military activities without distinction as to their application for administrative or combat purposes, excluding real property, installations, and utilities. Materiel is either serviceable (i.e., in an issuable condition) or unserviceable (i.e., in need of repair to make it serviceable).

21. Materiel Manager. Personnel in any DoD activity or agency that has been assigned materiel management responsibilities for the DoD and participating federal agencies. The term includes responsibilities performed by either wholesale materiel managers or retail materiel managers: managing, cataloging, demand and supply planning, requirements determination and definition, procurement, distribution, overhaul and repair of repairable materiel, and disposal of materiel.
22. Operating Forces. Those forces whose primary missions are to participate in combat and the integral supporting elements thereof.
23. Peacetime Operating Stock. The stock of materiel on hand at the unit or intermediate level to meet routine operations and training requirements. Peacetime operating stock can be used to meet wartime requirements.
24. Pre-position. To place military units, equipment, or supplies at or near the point of planned use or at a designated location to reduce reaction time and ensure timely support of a specific force during initial phases of an operation.
25. Principal Item. An end item or a replacement assembly of such importance to operational readiness that management techniques require centralized individual item management throughout the supply system including items stocked at depot level, base level, and using unit level. Principal items do not include complete aircraft, ships, tanks, helicopters, other combat and tactical vehicles, intercontinental ballistic missiles, intermediate range ballistic missiles, or space vehicles.
26. Prepositioned War Reserve Materiel (PWRM). War Reserve Materiel strategically located to facilitate a timely response in support of CDR requirements during the initial phases of an operation.
27. Risk Management (RM). The process to identify, assess, and control risks and make decisions that balance risk cost with mission benefits. (JP 3-0)
28. Secondary Item. An item of supply that is not defined as a principal item and includes repairable item components, subsystems, assemblies, consumable repair parts, bulk items, and material, subsistence, and expendable end items, including clothing and other personal gear. Secondary items include both appropriation-funded and stock-funded items.
29. Starter Stock. War Reserve Materiel stocks prepositioned in or near a theatre of operations to last until resupply at wartime rates is established.
30. Sustainment. The provision of logistics and personnel services required to maintain and prolong operations until successful mission accomplishment. (JP 3-0)
31. Time-Phased Force and Deployment Data (TPFDD). The time-phased force, non-unit cargo, and personnel data combined with movement data for the operation plan, operation order, or ongoing rotation of forces. (JP 5-0)
32. Total Munitions Requirement (TMR). The sum of the War Reserve Munitions Requirement and the Training, Testing, and Current Operational Requirement (TTCOR). Applies to Class V only.

33. War Materiel Requirement (WMR). The quantity of an item required to equip and support forces specified in the current Secretary of Defense guidance through the period prescribed for war materiel planning purposes. Represents the total USMC requirement of equipment and supplies to train, equip, field, and sustain forces in combat based on the requirements of the individual MEFs, to include assigned Select Marine Corps Reserve (SMCR) units, committed to a distinct Major Theater of Wars (MTW).

34. War Reserve Materiel (WRM). Mission-essential secondary items, ME, and munitions sufficient to attain and sustain operational objectives in scenarios authorized in the Secretary of Defense (SecDef) Guidance for Employment of the Force (GEF) and the Joint Strategic Capabilities Plan (JSCP) scenarios.

35. War Reserve Materiel Requirements (WRMR). That portion of the WMR required to be on hand on D-day. This level consists of the war materiel requirement less the sum of the peacetime assets assumed to be available on D-day and the war materiel procurement capability. WRMR reflects more than just combat replacements and should not be confused with CRR.

36. War Reserve Materiel Requirements In-stores (WRMR-I). The portion of the War Reserve Materiel Requirement that has been designated to be held by MARCORLOGCOM. WRMR-I = CRR - Prepo.

37. War Reserve Materiel Shortfall. WRM shortfalls are unfilled WRM requirements due to shortages in the entire JLEnt inventory and are subject of the MRM process to determine mitigation strategies. Shortfalls can also be caused by the lack of timely distribution (failure to meet GCC RDDs) even if the inventory exists within the USMC or JLEnt.

38. War Reserve Program (WRP). The WRP manages all aspects of WRM for the Marine Corps, incorporating requirements determination, sourcing, materiel risk management, registration, and execution of WR withdrawals in support of OPLANs/CONPLANS.

APPENDIX C

RISK MATRIX

CoS	Risk to Force	Considerations	Risk Mitigation Strategies
Cl I, Water, VI	Force does not receive minimum calories and water to execute mission critical duties	<ul style="list-style-type: none"> <li>• Cl I calories</li> <li>• Gallons of potable water</li> <li>• Hygiene level</li> <li>• Environment</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust PBA</li> <li>• Establish ISSA</li> <li>• DLA WSR</li> <li>• Contingency contracting</li> <li>• HNS</li> <li>• CLF</li> </ul>
Cl II (ICCE)	Force does not have access to equipment with adequate form, fit and function to provide force protection and execute mission critical duties (Individual weapons and other non-ICCE items are managed like Cl VII)	<ul style="list-style-type: none"> <li>• Unit ICCE list</li> <li>• Tariff sizing</li> <li>• Individual armor/survivability</li> <li>• Casualty estimates</li> <li>• CRR</li> </ul>	<ul style="list-style-type: none"> <li>• Redistribute existing inventory</li> <li>• Accelerate existing contracts</li> <li>• Contingency contracts</li> <li>• Suitable substitutes from industrial base</li> <li>• COTS</li> <li>• Increase CSP inventory</li> <li>• Improve tariff data</li> </ul>
Cl III (P)	EDL not supported by adequate packaged POL to maintain mission critical equipment operation	<ul style="list-style-type: none"> <li>• PM schedule</li> <li>• Unscheduled maintenance</li> <li>• Consumption rates</li> <li>• Replacement of repairable items/sub-assembly</li> <li>• combat casualties</li> </ul>	<ul style="list-style-type: none"> <li>• DLA WSR link to DESC</li> <li>• Contingency contracting</li> <li>• HNS</li> <li>• CLF</li> <li>• Increase inventory on MPF, LFORM</li> <li>• Improve capture of demand history</li> </ul>
Cl IV	Force does not have adequate fortification, barrier and/or construction material to meet Commanders mission critical force protection and mobile defense goals	<ul style="list-style-type: none"> <li>• Force protection</li> <li>• Barrier plan</li> <li>• Mobile defense plan</li> <li>• Force bed-down plan</li> <li>• Casualty estimates</li> </ul>	<ul style="list-style-type: none"> <li>• DLA WSR link to DSCC</li> <li>• Contingency contracting</li> <li>• HNS</li> <li>• Increase inventory on MPF, LFORM</li> <li>• Improve capture of demand history</li> <li>• Improve AIS with Joint tool</li> <li>• Additive manufacturing</li> </ul>

CoS	Risk to Force	Considerations	Risk Mitigation Strategies
Cl VII	Equipment density of weapons systems not adequate to meet commanders combat requirements at appropriate intensity	<ul style="list-style-type: none"> <li>• T/E or EDL requirements</li> <li>• CRR</li> <li>• Secondary repairable meantime between failure rates</li> <li>• Pkg POL consumption rates</li> </ul>	<ul style="list-style-type: none"> <li>• Additional global enterprise sourcing</li> <li>• Cross-Service common item sourcing</li> <li>• COTS</li> <li>• Accelerated of contingency contracting</li> <li>• Increase service WRM investment</li> </ul>
Cl IX	Consumable, battery and secondary repairable parts inventory not adequate to support T/E or EDL mission critical function	<ul style="list-style-type: none"> <li>• T/E or EDL Requirements</li> <li>• CRR</li> <li>• Meantime between failure rates</li> <li>• Historical usage data</li> <li>• OST</li> <li>• Repairable items/sub-assembly</li> <li>• combat casualty estimates</li> </ul>	<ul style="list-style-type: none"> <li>• Contingency contracting</li> <li>• HNS</li> <li>• Procurement of suitable substitutes</li> <li>• Additive manufacturing</li> <li>• Improve capture of demand history</li> <li>• Increase Service WRMR investment</li> </ul>