



MCTP 3-40H

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# MAGTF Supply Operations

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U.S. Marine Corps

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FOREWORD

Marine Corps Tactical Publication (MCTP) 3-40H, *MAGTF Supply Operations*, provides guidance governing the principles and concepts of supply as well as the organization, integration, planning, and execution of Marine air-ground task force supply support in an expeditionary operating environment. This publication also provides essential information concerning supply sources and options capable of supporting all phases of operations.

This publication is primarily intended for commanders and their staffs to expand their knowledge and understanding of the supply process and how it meets expeditionary force requirements. It concentrates on ground and aviation supply support necessary to sustain Marine Corps expeditionary operations.

This publication supersedes MCTP 3-40H, *MAGTF Supply Operations*, dated 29 February 1996.

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS



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Major General, U.S. Marine Corps  
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**To Our Reader**

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# CHAPTER 1

## OVERVIEW

The Marine Corps task organizes across the range of military operations in accordance with its statutory mandate to provide forces by forming integrated combined arms Marine air-ground task forces (MAGTFs). The basic MAGTF includes four elements—a command element (CE), ground combat element (GCE), aviation combat element (ACE), and logistics combat element (LCE). The following are the four standard types of MAGTFs:

- Marine expeditionary force (MEF).
- Marine expeditionary brigade (MEB).
- Marine expeditionary unit (MEU).
- Special purpose Marine air-ground task force (SPMAGTF).

Each MAGTF is uniquely task-organized with the personnel, equipment, and supplies required to accomplish its assigned mission. For example, a MAGTF may be augmented by a naval construction force (NCF) (also known as Seabees) that may either be incorporated into the LCE or operate as a separate element. The LCE commander in each MAGTF provides combat service support (CSS), including supply support, to the MAGTF commander. Based on the mission and recommendations from the LCE commander and the MAGTF staff, the MAGTF commander decides on supplies required beyond the basic load. This basic load is measured in days of supply (DOS) and days of ammunition (DOA). A MEU normally deploys with the logistic capability to sustain itself with designated classes of supply for up to 15 days, a MEB for up to 30 days, and a MEF for up to 60 days.

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### ORGANIC AND NONORGANIC SUPPLY

The MAGTF provides combatant commanders with scalable, versatile, expeditionary forces able to assure allies, deter potential adversaries, provide persistent US presence with little or no footprint ashore, and respond to a broad range of contingency, crisis, and conflict situations. Supply capabilities must be robust and flexible enough to support a variety of MAGTF operations.

United States Code, Title 10, *Armed Forces*, and Department of Defense Directive 5100.1, *Functions of the Department of Defense and Its Major Components*, describe the statutory requirements for each Military Department to provide logistic support to assigned forces. The Marine Corps logistic support system is retained and exercised by the applicable Marine Corps forces in accordance with Service policies and directives. The Marine Corps component command provides logistic oversight for the MAGTF and must ensure the MAGTF operates within the guidelines of the combatant commander. Organized under US Special Operations Command,

Marine Forces Special Operations Command units receive common supply support from their Service component command while special operations unique supplies and equipment are obtained and sustained via the respective theater special operations command.

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## **LEVELS OF LOGISTICS**

Logistics is a Marine Corps warfighting function. It involves activities by strategic-, operational-, and tactical-level organizations to move and sustain forces. While Marine Corps headquarters interfaces with the national industrial base and other Services for strategic-level logistics, it has internally demonstrated great facility in conducting operational-level logistic planning and execution. Success at the operational level has historically been enabled by significant assistance from inter-Service, inter-Governmental, and multinational materiel and services augmentation. Validated tactical-level expertise, training, and equipping remain organic skill sets. Tactical-level logistics focuses on the Marine Corps' six functional areas of logistics—supply, maintenance, transportation, general engineering, health services, and services. Failures in managing and anticipating supply needs in one functional area can lead to a cascading effect on other functional areas due to the inherent need for materiel to support the execution of all functions.

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## **COMBAT SERVICE SUPPORT**

The objective of CSS is to sustain all elements of an operating force in an area of operation. Effective CSS is flexible and responsive in supporting the MAGTF commander's priorities during combat operations. Both tactical-level logistics and CSS are guided by the following set of seven logistic principles for planning, organization, management, and execution purposes and to provide the needed flexibility:

- *Responsiveness*. Providing the right support at the right time and at the right place. Among the principles of CSS, responsiveness is considered the most important. Several factors contribute to the responsiveness of supply support. These include accurate forecasting of consumption, identification of the most critical supply items, and the use of an automated information system (AIS) to requisition supplies, manage inventory, and provide visibility regarding the location of requisitioned items. As a result of these factors, close coordination among supply, transportation, and communications functional areas is necessary to achieve responsive supply support. See appendix A for more information about logistic AISs.
- *Simplicity*. Ensuring that logistic operations and supply operations are conceptually, structurally, and procedurally simple. This is achieved through the use of mission-type orders and reliance on standardized procedures. For example, using an AIS permits the submission of standardized requisition (ordering) forms.
- *Flexibility*. Adapting logistic structures and procedures to the changing situation, mission, and concept of operations (CONOPS). The principle of flexibility also includes the concepts of alternative planning, anticipation, reserve assets, redundancy, and echelons.

- *Economy.* Using available logistic assets prudently and efficiently. Economy is used to provide support with the least amount of resources required and with only the support necessary to accomplish the mission. The goal of supply operations is to provide supply quantities that correspond to consumption requirements or planning factors.
- *Attainability.* Generating the minimum essential supplies and services required to begin operations across the range of military operations.
- *Sustainability.* Providing supply support throughout the period required with minimal limitations on support.
- *Survivability.* Prevailing in the face of potential destruction and degradation is an inherent capacity of the organization. Supplies are essential to establish and maintain operational tempo in the face of a threat to survivability.

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## **SUPPLY FUNDAMENTALS**

In support of the MAGTF, the LCE commander's primary responsibility is providing the MAGTF commander with initial supplies when deployed and resupply when required.

### **Classes of Supply**

All supply activities in support of the MAGTF are concerned with the management of supplies. For planning, management, and administrative purposes, supplies are divided into ten classes, which are universal across the Department of Defense (DOD).

**Class I—Subsistence.** Class I supplies consist of both perishable and semiperishable subsistence items, such as meals, ready to eat (MREs), unitized group rations (UGRs), and unitized group rations-heat and serve (UGR-H&S). Class I's commonality across the Services provides a suitable opportunity to coordinate for common-user logistics (CUL) support as a method of increasing responsiveness while minimizing storage and shipment requirements.

**Class II—Clothing, Individual Equipment, Tools, Administrative Supplies.** Class II consists of items such as clothing, individual equipment, tentage, organizational toolsets, toolkits, handtools, maps, administrative and housekeeping supplies, and small arms. These items support day-to-day operations equipment lists and all items on general-use consumable lists. Equipment and items common to the Services, short of individual weapons, are viable candidates for CUL management. Common-user logistics Class II also has significant applicability to humanitarian support missions in which a Service or agency is supporting other government agencies and nongovernmental organizations with selected Class II items. Care needs to be given when identifying a Class II asset versus a Class X resource, mainly due to funding and regulatory guidelines that govern issuance of United States Government (USG) items for nongovernmental consumption.

**Class III—Petroleum, Oils, Lubricants.** Class III products include fuel, hydraulic and insulating oils, preservatives, bulk chemical products, coolants, de-icing and antifreeze compounds (together with components and additives of such products), liquid and compressed gases, natural gas, and coal. Most Class III products are excellent candidates for CUL support because of their commonality across all the Services.

**Class IV—Construction Materials.** Class IV consists of fortification, barrier, and other construction materials. Construction machinery, equipment, vehicles, and tools used in construction are not part of Class IV. Class IV materials may be procured locally, regionally, or brought from the continental United States and may be provided through a variety of means, including common-user provisioning.

**Class V—Ammunition.** Class V consists of ammunition of all types. Class V (W) materiel consists of ground ammunition of all types, including chemical, biological, radiological, and other special weapons; bombs; explosives; land mines; fuzes; detonators; pyrotechnics; propellants; and associated items. Routinely, only small-arms munitions and selected pyrotechnic devices are considered appropriate for CUL support; however, additional common-user opportunities may be possible for other Class V items, such as artillery and tank rounds. Aviation specific ordnance, Class V (A), should not be considered common-user unless the appropriate aviation ordnance officer or command has specifically indicated compatible munitions categories. For more information about Class V(A) supplies, refer to Marine Corps Tactical Publication (MCTP) 3-20A, *Aviation Logistics*.

**Class VI—Personal Demand Items.** Class VI consists of health and comfort packages and female sundry packages. Health and comfort packages contain toothbrushes, toothpaste, razors, and personal demand items. Female sundry packages contain additional gender-appropriate health and comfort items. Class VI is not Service-specific; therefore, it is appropriate for CUL. Class VI materiel is procured and managed by the various Service exchange systems (e.g., the Army-Air Force Exchange System, Navy Exchange Service Command, the Marine Corps Exchange) and morale, welfare, and recreation organizations.

**Class VII—Major End Items.** Class VII consists of major end items that are normally procured by the individual Service's hardware systems commands as part of their major acquisition programs. These items include major warfighting equipment for the combat forces (e.g., ships, aircraft, tanks, launchers, vehicles). Units requiring replacement of Class VII items coordinate directly through the MEF or Marine Corps component commands to Headquarters, United States Marine Corps (HQMC) and Marine Corps Logistics Command (MARCORLOGCOM). Class VII items are not usually considered for CUL support.

**Class VIII—Medical Materials.** Class VIII consists of two major subclasses: Class VIII(A) and Class VIII(B). Class VIII(A) consists of all medical supplies and materiel to include optical lens fabrication, medical equipment maintenance, medical-unique repair parts, and medical gases. Further subclasses of Class VIII(A) include controlled substances, rubbing alcohol, precious metals, and nonexpendable and expendable medical and dental items. Class VIII(B) is comprised of blood and blood products, including whole blood, packed red blood cells, frozen red blood cells, fresh frozen plasma, and platelet concentrate. Because of the commonality of Class VIII items, they should be considered for CUL management. Due to the control requirements associated with the management of medical materiel, using units will seldom, if ever, maintain Class VIII that exceeds authorized medical allowance lists (AMALs)/authorized dental allowance lists (ADALs). The major subordinate command's health service support staff will provide additional guidance on Class VIII. Also see Marine Corps Reference Publication (MCRP) 3-40A.5, *Health Service Support Field Reference Guide*.

**Class IX—Repair Parts.** Class IX consists of consumable or nonconsumable parts and any subassembly, assembly, or component parts required in the maintenance or repair of an end item, subassembly, or component. Military Services have management responsibility for the depot-level repairable items and major items and assemblies in their weapon systems, while the Defense Logistics Agency (DLA) manages the consumables and kits. Common-user logistics Class IX support should be considered where commonality of equipment exists and supporting automation systems allow; however, CUL should not be considered as a primary means to provide Class IX support. When CUL Class IX support relationships are established, specific requisitioning and reimbursement procedures must be worked out in detail in order to ensure that requisitions are properly submitted, tracked, filled, and remunerated.

**Class X—Nonmilitary Programs.** Class X includes materiel used in support of nonmilitary/civic action programs, including agricultural and economic development. Frequently, Class X will be considered when conducting humanitarian assistance and disaster relief operations. Careful accounting, storage, issuance, and funding practices need to be maintained to ensure that appropriated funds are not used for items that have funding streams provided by other titles in United States Code. Categorically, these items will not be included in other classes of supply.

### **Subfunctions of Supply**

Supply operations are broken down into six subfunctions: determination of requirements, procurement, storage, distribution, salvage, and disposal.

**Determination of Requirements.** In logistic/CSS terms, supply requirements are the needs for those commodities essential to begin and sustain combat operations. Supply operations are driven by planning, and requirements determination is an initial step in the planning process.

**Procurement.** Procurement is the purchasing of goods and services. The Marine Corps, like the other Services, is allocated funds for the purchase of required supplies, like Class VII (major end items), or it receives items as part of the initial issue. After initial acquisition or fielding, obtaining repair parts and maintenance supplies required for these items becomes the responsibility of the Marine Corps. Most secondary items are purchased through stock funds (operating budget funds). Supply personnel may procure these items through the General Services Administration (GSA) Global Supply, DLA, or from civilian manufacturers and contractors for the Marine Corps.

At the consumer level, procurement relates to those supplies and items of equipment that the commander determines are needed to begin and sustain operations. Contingency contracting will execute procurement actions not available through the normal supply chain or other sources of supply. See MCRP 3-40B.3, *Contingency Contracting*, for additional information on contingency contracting.

**Storage.** Storage involves the safekeeping of supplies and equipment in a ready-for-issue condition. The storage function includes the process of receipting for supplies and equipment from a source and the responsibility for maintaining accurate inventory controls. Packaged food supplies, clothing, construction materials, major end items, and repair parts normally require simple shelter and security. However, perishable food supplies also require refrigeration. Most medical supplies stored at the Marine logistics group's (MLG's) medical logistics company have

special considerations such as shelf life and/or refrigeration requirements. Petroleum, oils, and lubricants (POLs) and ammunition supplies generally have special or unique storage requirements due to their hazard potential.

**Distribution.** Distribution is the concept of synchronized and integrated efforts of supply and transportation within a network of nodes and modes. Tactical distribution is the point in the joint distribution system where supply items transfer from the MAGTF supply activity to the end consumer or from the operational-level supply activity to the MAGTF supply activity. This includes the issue of supplies and equipment to using units or to intermediate supply points by the appropriate mode of transportation for future issue. The tactical distribution process can be simplified into two steps: the registering of a demand by a using unit and the issuance or transference of item custody at a supply point by the appropriate mode of transportation.

**Salvage.** The salvage process encompasses the recovery, evacuation, processing, storage, reclamation, and reissue of materiel. This includes captured materiel. Salvage is property that has some value beyond that of its basic material content, is not economically repairable, and can no longer be used for its intended purpose. Salvage collection points are established points that receive salvage items, usually from the disposal collection points, for reissue. The salvage collection points are managed by detachments of the LCE.

**Disposal.** Disposal is the process of eliminating excess, obsolete, or unserviceable property. Disposal may include transfer, donation, sale, or abandonment. It does not include redistribution or reissue. Consumable supplies are disposed of by the local using unit. Controlled, serialized, and major end items must be sent to salvage collection points for disposal when a unit is deployed. During exercises and contingencies, tactical vehicles are used to distribute supplies to requesting/consuming units. Depending on space made available by unloaded supplies, the same vehicles may be employed to transport disposal items to salvage collection points. Special consideration must be given to the accountability, handling, and transportation of radioactive, hazardous, or controlled items.

### **Operational Supply Terms and Concepts**

The following subparagraphs discuss basic terms and concepts that are required for common understanding in order to manage the planning and execution of supply operations. The foundation of these concepts is nested with MCTP 3-40B, *Tactical-Level Logistics*.

**Supply Nodes.** Supply nodes undertake traditional warehousing activities (i.e., receipt, store, and issue) with the node operator normally establishing supply accountability for materiel. At these locations, the Services perform receipt operations to receive the materiel from the delivery conveyance, in-check the shipment, and enter the appropriate information into the Service system. The efficiency and accuracy of this input is dependent upon source data and the in-transit visibility (ITV) technology that accompanies the shipment. The receipt process establishes the Service's supply accountability for the materiel by placing it on the Service's asset balance file, thus making it available for redistribution. When a demand for materiel is received, the supply node performs the normal supply functions of picking, packing, and generating source data necessary to establish a record in the appropriate AIS and to perform the shipping process. See Joint Publication (JP) 4-09, *Distribution Operations*, for additional information.

**Supply Points.** A supply point may be any planned location where supplies, services, and materiel are located and issued. These locations are temporary and mobile, normally being occupied for 72 hours or less. Supply points are used as a tactical control measure.

**Stores Account Code.** Stores account code (SAC) classifications are as follows:

- SAC 1—low cost, high demand items that are requisitioned and funded by the using units (e.g., Class IX repair parts).
- SAC 2—secondary reparable (SECREP) items (e.g., depot reparable items, modification kits). They are unit funded and typically held by intermediate maintenance activities.
- SAC 3—principal end items (referred to as PEIs) that are funded by HQMC (e.g., vehicles).

**Table of Authorized Materiel.** The table of authorized materiel (TAM) consists of three types of equipment:

- Type I—required items such as individual combat clothing and equipment and weapons.
- Type II—local allowances authorized by commanders for unit-specific functions, such as encampment and garrison equipment to be on hand for units/commands to support their assigned missions.
- Type III—environmental items such as cold weather, desert, and tropical equipment.

**Supply Management.** Supply management is the administration of the supply transactions resulting in demand fulfillment. This differs from supply or supply operations because it focuses on the people and processes that manage the transactions that affect the performance of supply activities. In effect, supply management is the mission-essential task performed by a functional supply unit. The lead activity in the MAGTF is the intermediate supply activity. Using-unit supply activities will coordinate supply support with the supply management unit (SMU) as their primary source of supply.

**Supply Chain Management.** The DOD supply chain begins with the strategic industrial base and flows through the distribution of finished goods to units for use or consumption. Supply chain management (SCM) is a cross-functional approach to procuring, producing, and delivering products and services to customers. (JP 4-09) This broad management scope includes subsuppliers, internal information, and funds flow. Supply chain management can be simplified as the process of holistically analyzing the supply chain, implementing controls, and measuring the effectiveness of controls on the system's ability to fulfill demands at the point of use. Supply chain management is executed at the strategic level of war. The DLA is the DOD's executive agent and Service-level advocate for the global distribution pipeline, which organizes, plans, executes, and assesses all DOD logistics across the range of military operations (see fig. 1-1 on page 1-8). The DLA carries out its sustainment mission via the process of DOD SCM. Although MARCORLOGCOM executes supply chain functions, SCM is an Office of the Under Secretary of Defense for Acquisition and Sustainment responsibility that is executed under the guidance of the Service chiefs.

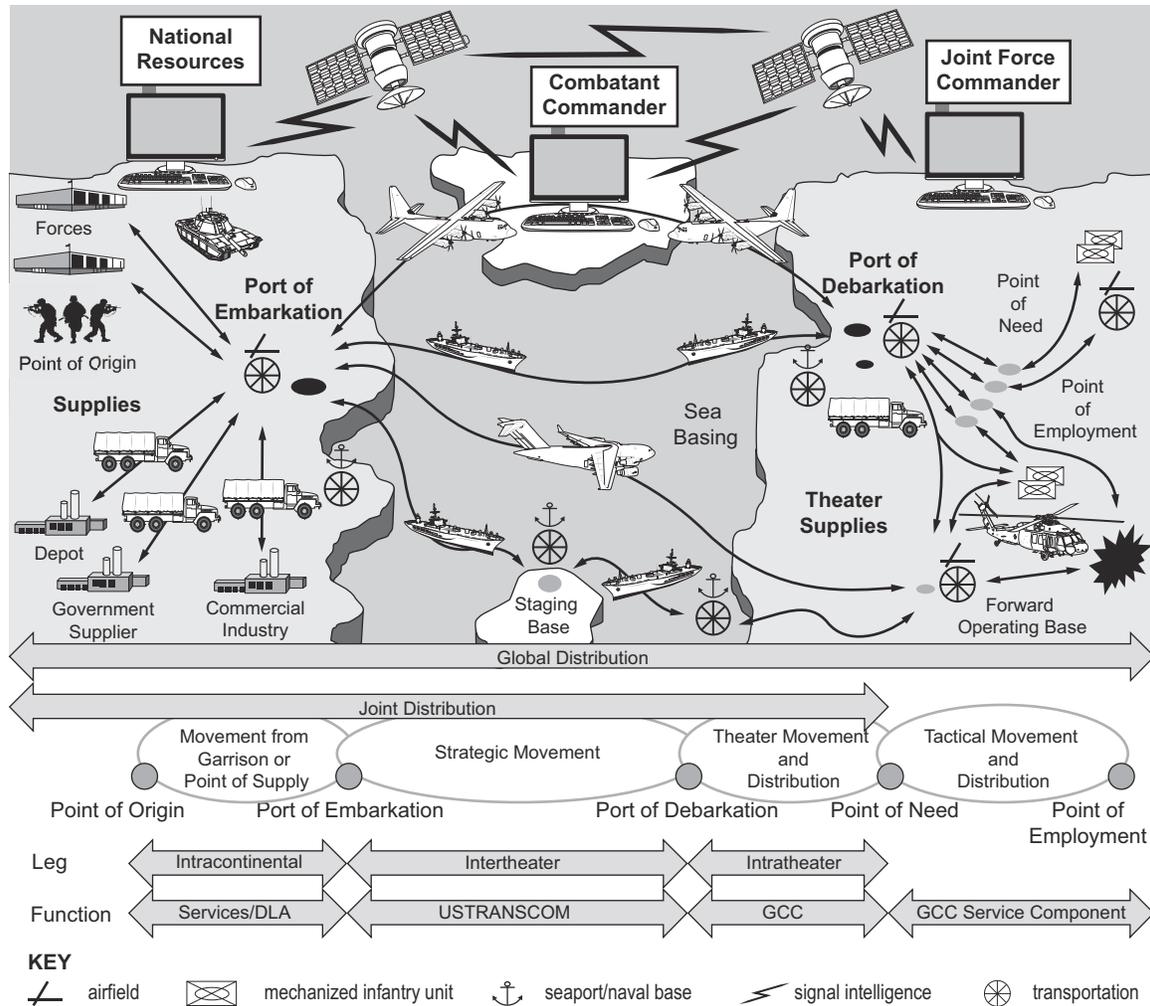


Figure 1-1. Global Distribution Pipeline.

**Financial Management.** Financial management is inseparable from command, as emphasized in MCTP 3-40B. Like maintenance operations, financial management operations influence the performance of supply activities. Procurement is the purchasing aspect of supply, and financial management is the control for expenditures of operating funds. The allocation of funds follows command chains, and the cost of goods and services is billed to the using-unit's operating fund. The purpose of this management function is not to limit spending for its own sake; it is to promote efficient spending in support of assigned missions. The planning and execution cycle for financial management follows the Marine Corps Planning Process, wherein the planning and execution of a budget has reporting requirements that are designed to support the commander's decision-making cycle (for more information, see Marine Corps Warfighting Publication 5-10, *Marine Corps Planning Process*). Operating budgets define the capabilities and limitations that require prioritization of purchases and promote a simple and cost-efficient CONOPS that is feasible within allocated funds. The determination of inadequate funds to execute a course of action (COA) does not negate feasibility; rather, it triggers a reporting process to a higher headquarters to justify the allocation of additional funds to accomplish assigned missions. This keeps the status of allocated funds, budgets, and the fiscal situation as key considerations for commanders as they issue planning guidance and mission assignments.

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## INVENTORY LEVELS OF SUPPLY

### **Wholesale**

Wholesale is the highest level (strategic level) of organized supply. Wholesale activities procure, repair, and maintain stocks to resupply the retail level of supply. The terms “wholesale supply,” “wholesale level of supply,” “wholesale echelon,” and “national inventory” are synonymous. This level of supply includes inventories over which a manager at the national level has asset knowledge and exercises unrestricted asset control supporting worldwide inventory responsibilities to execute wholesale demand fulfillment. The Marine Corps link to wholesale inventory is the inventory control point/remote storage activity, which is managed by MARCORLOGCOM.

### **Retail**

Retail is the level of inventory below the wholesale level, either at the intermediate or regional level. Retail inventory supplies consumer organizations or end users within a geographical area and includes both consumer and intermediate inventory.

**Consumer Inventory.** Consumer inventory, “usually of limited range and depth, is held by the final element in an established supply chain distribution system for the sole purpose of internal consumption within that final element”. (Marine Corps Order [MCO] 4400.201, *Management of Property in the Possession of the Marine Corps—Volumes 1–17*) Consumer inventory is independent of echelon of command and can exist at any level, whether strategic, operational, or tactical.

**Intermediate Inventory.** Intermediate inventory is held “between the consumer and wholesale levels of inventory for support of a defined geographical area or for tailored support of specific organizations or activities”. (MCO 4400.201)

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# CHAPTER 2

## SUPPLY SUPPORT AVAILABLE TO THE MARINE AIR-GROUND TASK FORCE

Supply support must be provided to the MAGTF across the strategic, operational, and tactical levels of war.

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### STRATEGIC-LEVEL SUPPLY SUPPORT

At the strategic level of war, a nation, often as a member of a group of nations, determines national or multinational (alliance or coalition) strategic security objectives and guidance, then develops and uses national resources to achieve those objectives.

#### **United States Code, Title 10, *Armed Forces***

Federal law in the United States provides governance and the source of the authority by which the Services train, man, and equip to function as the Armed Forces under the DOD. Specific guidance is given within United States Code for acquisition authority. The Department of the Navy provides oversight of Marine Corps Systems Command under the cognizance of Naval Sea Systems Command for the research, development, and fielding of major defense programs.

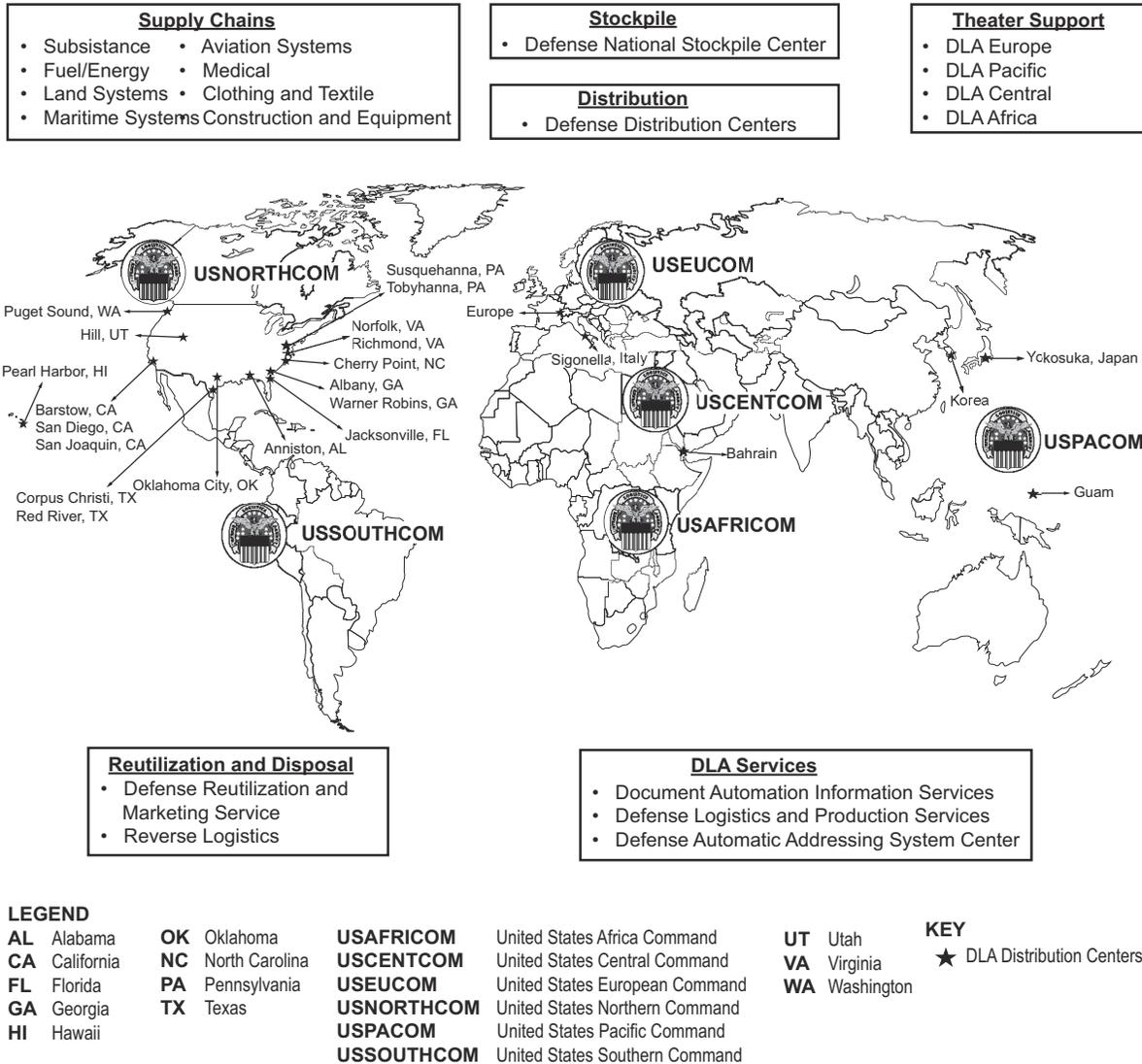
#### **Defense Logistics Agency**

The DLA is DOD's combat support agency that provides logistic support. The DLA's mission is to provide integrated logistic solutions to DOD and other designated customers around the clock and around the world. The DLA partners with the Services, the combatant commands, and private industry to provide full-spectrum support. The DLA sources and provides nearly all of the consumable items the Armed Forces need to operate, from food, fuel, and energy to uniforms, medical supplies, and construction and barrier equipment. The DLA also supplies DOD with more than 85 percent of its spare parts. In addition, the DLA manages the reutilization of military equipment, provides catalogs and other logistic information products, and offers document automation and production services. See figure 2-1 on page 2-2.

#### **General Services Administration**

The GSA oversees the business of the Federal Government. The GSA's acquisition solutions supply federal purchasers with cost-effective, high quality products and services from commercial vendors and provide tools, equipment, and nontactical vehicles to DOD.

The GSA Global Supply is a government-to-government wholesale supply source. As outlined in the Federal Acquisition Regulation (8.002, Priorities for Use of Mandatory Government Sources),



**Figure 2-1. Defense Logistics Agency Global Support.**

the GSA is a wholesale supply source (along with the DLA) that agencies should utilize for supply requirements. When an order is placed with GSA Global Supply, the order is placed directly with the USG. The GSA Global Supply has already procured the most in-demand products on the USG’s behalf, meaning that an order is a simple requisition between agencies.

## OPERATIONAL-LEVEL SUPPLY SUPPORT

The operational level of war involves campaigns and major operations planning, conduct, and sustainment to achieve strategic objectives within theaters or operational areas.

**Retail at the Operational Level**

Supply activities at the operational level of war primarily organize and manage supply support for an individual Service as an intermediate activity between consumer, intermediate, and wholesale supplies executing retail demand fulfillment. These activities are regionally aligned to a geographic area for tailored support of specific organizations or activities. For further information on retail intermediate-level supply, see MCO P4400.151B, *Intermediate-Level Supply Management Policy Manual*.

**Defense Logistics Agency**

In addition to DLA's strategic mission, DLA has subordinate commands that bridge the gap between strategic- and tactical-level supply support:

- *DLA Land and Maritime*. Supplies weapon systems spare parts with end-to-end SCM, connecting the supplier to the customer.
- *DLA Aviation*. Provides support to more than 1,800 major weapon systems and is the Armed Forces' integrated materiel manager for more than 1.1 million repair parts and operating supply items in support of all fixed-wing, tiltrotor, and rotary-wing aircraft. Additionally, DLA Aviation manages depot-level repairable procurement operations, operates an industrial plant equipment repair facility, and operates the Federal Government's only industrial plant equipment facility.
- *DLA Troop Support*. Provides support to Armed Forces members with food, clothing, textiles, medicines, medical equipment, construction supplies and equipment, and repair parts for major weapon systems. They also support US humanitarian and disaster relief efforts around the world.
- *DLA Energy*. Provides support to DOD and other USG agencies with comprehensive energy solutions in the most effective and efficient manner possible by serving as an integrated materiel manager for DOD's petroleum mission, managing the acquisition, storage, distribution, and sale of fuel, with responsibility ending at the Service installation boundary.
- *DLA Distribution*. Provides global distribution support across DOD activities and is responsible for the receipt, storage, issue, packing, preservation, and transportation of more than 4 million items.
- *DLA Disposition Services*. Provides disposal of excess property received from the Services. Property is first offered for reutilization within DOD, transfer to other Federal agencies, or donation to state and local governments and other qualified organizations. Excess property that is not reutilized, transferred, or donated may be sold to the public. Disaster relief at home, humanitarian assistance, and foreign military sales programs are also supported by DLA Disposition Services.

**Marine Corps Logistics Command**

Marine Corps Logistics Command is the hub for providing operational-level logistic support to the Marine Corps forces. The mission of MARCORLOGCOM is to provide worldwide, integrated logistic/supply chain management and distribution management, maintenance management, and strategic prepositioning capability in support of the Marine Corps forces and other supported units. Thus, MARCORLOGCOM is chartered to maximize unit readiness and sustainability and supports enterprise- and program-level total life cycle management as the hub for providing operational logistic support to the Marine Corps forces. Related to the wholesale supply functions,

MARCORLOGCOM manages depot maintenance activities and influences supply chain decisions that drive readiness across the operating forces.

**War Reserves.** Marine Corps Logistics Command is responsible to the Deputy Commandant for Installations and Logistics for implementing war reserve materiel policies and procedures. The materiel readiness and utilization of the reserve stocks are the wholesale supply capability organic to the Marine Corps. War reserve materiel requirements drive MARCORLOGCOM's standards for the supplies managed. The governing document for the administration of wholesale stocks is MCO 4400.201. To accomplish effective wholesale support, MARCORLOGCOM monitors the operational requirements requested by the MEF against in-stock assets on a quarterly basis.

**The Maritime Prepositioning Force.** The maritime prepositioning force (MPF) consists of two maritime prepositioning ships squadrons (MPSRONS), each comprised of USG-owned and civilian-crewed Military Sealift Command ships. The ships are loaded with the majority of the equipment and supplies needed to support a MAGTF (up to a MEB). These ships also have equipment and supplies to support a naval mobile construction battalion and establish an expeditionary airfield (EAF), along with an expeditionary medical facility ashore. Each MPSRON has ships that are both roll-on/roll-off and lift-on/lift-off capable, thus providing a range of options for off-load. The exception to this is the T-AKE class ship, which has lift-on/lift-off, vertical replenishment, and connected replenishment capabilities. Prior to employment, the MAGTF's arrival and assembly operations group (referred to as AAOG) personnel deploy to an airfield near a port or beach where the MPSRON can be off-loaded. Simultaneously, off-load preparation party (OPP) personnel deploy to the ship's port of embarkation or meet the ship en route in order to prepare maritime prepositioning equipment and supplies for off-load, which, upon arrival, are issued to the MAGTF.

The Marine Corps has recently integrated two T-AKE class ships (USNS Lewis and Clark and USNS Sacagawea) into the MPF program. These vessels provide a range of enhanced logistic support capabilities to the Marine Corps operating forces, specifically during sea-based operations. They provide sea-based sustainment via selective off-load of tailored, unitized sustainment packages through vertical and surface lift to sustain Marine Corps operating forces afloat and ashore. The MPF T-AKE capability increases the MAGTF's throughput and access to common-item support. The T-AKE capability should be thought of as a materiel issue point or as another source of supply. Depending on the scope and scale of the event, the logistic section/department/element should ensure the T-AKE capability is incorporated into the concept of support and understand its value in the role of augmenting sustainment efforts by the MAGTF.

**Marine Corps Prepositioning Program–Norway.** The Marine Corps Prepositioning Program–Norway is a HQMC-sponsored and bilaterally managed program to reinforce Norwegian defense plans and to serve as an on-continent, forward-staged supply resource for Marine Corps expeditionary operations. The equipment set allows for cost-effective staging of principal end items and critical materiel that serve theater security cooperation activities and provide a responsive source of combat enabling power for use by the geographic combatant commander. The storage sites, located within central Norway, provide for storage, maintenance, and periodic rotation of equipment and supplies. Targeted items for storage are mission essential, heavyweight/high volume, suited for extended storage, and not available through wartime host-nation support.

Prepositioned equipment and supplies support a notional MAGTF centered on an infantry battalion and composite aviation squadron.

**Marine Corps Logistics Command (Forward).** The direction and control of MARCORLOGCOM operations conducted in a geographic combatant commander's theater of operations may be centralized in a MARCORLOGCOM (Forward) in order to provide Service-level operational logistic support to Marine Corps operating forces and execute in-theater redeployment and retrograde in support of reset and reconstitution actions. The MARCORLOGCOM (Forward) is prepared to provide other services and/or capabilities as required that align with the MARCORLOGCOM core competencies of supply, maintenance, and distribution.

### **Marine Corps Systems Command**

Marine Corps Systems Command is the Marine Corps agent for acquisition and sustainment of systems and equipment used to accomplish the warfighting mission. Marine Corps Systems Command is focused on providing timely and consistent quality systems and equipment to the Marine Corps operating forces and managing those systems and equipment during their life cycle.

### **Common-Item Supply Support**

Common-item supply support refers to materiel required for use by more than one activity. Specified component commanders are usually assigned common-item supply support to all US Armed Forces and other US agencies in a region. Generally, this support involves Classes I, III (packaged), V, and VIII supplies. The MAGTF must establish direct liaison with the prescribed component/agency to ensure that required common-item supply support is received. The component/agency will furnish the MAGTF with implementing plans, programs, and operating instructions to provide common-item supply support required.

### **Naval Logistics Integration**

The Naval Logistics Integration (NLI) program seeks to achieve an integrated naval logistic capability that leverages current and future technologies, processes, and organizations to enhance the naval Services' warfighting capabilities. The goals and objectives of NLI are to integrate policy, doctrine, business processes, technologies, and systems to optimize logistic performance in support of future operations. It works to structure organizations and professional development to enhance support of naval expeditionary forces afloat and ashore. Thus, NLI exploits opportunities to reduce operational costs and increase asset visibility.

The naval Services are tasked to actively pursue the appropriate COA to improve naval logistics to the fullest extent possible. This is accomplished by integrating Service logistic capabilities and capacities in order to ensure a naval logistic capability that can operate seamlessly afloat or ashore and successfully support and sustain operating units in a joint warfighting environment. The most current version of the NLI Playbook can be accessed from the NLI homepage hosted on the Navy Knowledge Online portal (<https://www.nko.navy.mil>). For more information, see MCTP 13-10K, *Naval Logistics*.

**Priority Material Office.** The Navy's priority material office (PMO) sources, expedites, and tracks high priority requisitions for submarines, surface ships, Military Sealift Command units, naval special warfare units, Navy Expeditionary Combat Command units, deployed Marine Corps ground forces, and select Coast Guard units. By mission, the PMO is solely dedicated to global

cradle-to-grave sourcing, expediting, and tracking of all issue priority group-1 requisitions for warfighters, while maintaining accurate, near-real-time ITV for both customer units and higher headquarters.

*Note:* The current DOD UMMIPS [Uniform Materiel Movement and Issue Priority System] policy designates issue priority group-1 requisitions as those meeting the criteria for assignment of priority designators 01, 02, and 03.

By using the PMO, deployed MAGTF units leverage Navy resources to locate, procure, and expedite critical materiel, resulting in increased readiness levels. Also, the enhanced ITV provided by the PMO's integrated shipboard information system allows MAGTFs to better plan for required maintenance actions.

**Advanced Traceability and Control.** Advanced traceability and control (ATAC) is the Navy's logistic pipeline that combines finance, logistics, and transportation into a single physical distribution system. The system operates using a hub and spoke concept in which both depot-level repairable equipment and Marine Corps SECREP equipment are collected at satellite locations, known as nodes, for further transport to one of two hubs where they may be forwarded for repair or stowed at the appropriate depot overhaul point/depot storage point. Most often, the customer directly ships the majority of retrograde to its final destination using functionality in the Navy's electronic retrograde management system (eRMS), thus reducing touch points and time. The ATAC can also be used in the reverse mode, whereby repairable issue points (RIPs) can ship ready-for-issue repairable equipment to forward-deployed units.

Both the ATAC and the eRMS have a dramatic impact on the readiness of fleet and naval expeditionary forces, both afloat and ashore. The use of ATAC/eRMS enhances in-transit asset movement and visibility, avoids costly carcass charges, and greatly assists in the management of scarce, depot-level repairable/SECREP resources.

**Combat Logistics Force Ships.** Embarked units are authorized to requisition supplies from Navy combat logistics force (CLF) ships when operating within a logistic task force's area of operations. The ships within the CLF act as the supply lines to Navy ships at sea. These ships provide virtually everything that Navy ships need, including fuel, food, ordnance, spare parts, mail, and other supplies. The CLF ships enable the Navy fleet to remain at sea, on station, and combat ready for extended periods of time.

The MAGTF can leverage CLF capabilities in three areas—storeroom material, fuel that CLFs carry to support deployed ships, and the transportation network that links the ship (tactical-level logistics) to the supply chain (operational- and strategic-level logistics). The MAGTF supply officer accesses materiel by submitting a funded requisition directly to the amphibious ready group (referred to as ARG) ships' supply officer. The CLF ships cannot and do not stock everything needed by their customers, but they still serve as the delivery vehicle for ship sustainment. The MAGTF can and should leverage this capability, especially while still embarked on amphibious ready group shipping.

**Naval Supply Systems Command Fleet Logistics Center.** The Naval Supply Systems Command Fleet Logistics Center provides logistic, business, and support services to fleet, shore, and industrial commands of the Navy, Coast Guard, Military Sealift Command, and other joint and allied forces. The Naval Supply Systems Command Fleet Logistics Center delivers combat logistic capability by teaming with regional partners and customers to provide SCM; procurement, contracting, and transportation services; technical and customer support; defense fuel products; and worldwide movement of personal property.

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## **TACTICAL-LEVEL SUPPLY SUPPORT**

Tactical is the level of war at which battles and engagements are planned and executed to achieve military objectives assigned to tactical units or task forces. Supply support is critical to mission accomplishment on the tactical level.

### **Consumer Level Support**

The consumer level is the point of consumption by the supply activities at the tactical level of war that primarily organizes and manages supply support for a MEU or MEB. It links into the intermediate retail level, which executes consumer demand fulfillment. These activities are aligned to an assigned area of responsibility (AOR) for tailored support of specific organizations or activities. Consumer supply activities typically maintain inventories of a limited range and depth, held by the final element in an established supply distribution system for the sole purpose of internal consumption within that final element. For further details on consumer-level supply support, see MCO 4400.201.

### **North Atlantic Treaty Organization/Host-Nation Support**

Existing supply infrastructure should be leveraged to the greatest extent possible. This will increase the operational reach and flexibility of an expeditionary force by augmenting operational readiness materiel and organic stocks with a reliable and known network. These resources are identified in the physical network analysis portion of planning and accessed via North Atlantic Treaty Organization/host-nation support agreements. They should be used to enhance sustainability and support of the MAGTF. However, these resources should not be a total substitution for essential logistic planning and for CSS. The MAGTF supply and logistic planners must have a broad perspective that encompasses critical interactions with North Atlantic Treaty Organization and host-nation support agencies. Once again, MAGTFs should use these resources to the fullest extent so that organic logistic and supply capabilities are conserved for employment purposes. Specific agreements are classified and can be found in the regional logistic support guide.

### **Naval Support**

The Chief of Naval Operations provides materiel support to Marine Corps units for Navy-furnished materiel, equipment, and ammunition through the various systems commands. The systems commands formulate and issue policies, determine methods of procurement, and perform contracting functions. They produce, procure, and distribute naval materiel, equipment, and ammunition that are under Chief of Naval Operations cognizance.

**Aviation and Medical Support.** The Navy provides supplies used for medical/dental support throughout the Marine Corps. See chapter 4 for additional information concerning medical/dental supply support. Information concerning medical/dental supply support for Marine Corps aviation is located in chapter 5.

**Naval Construction Force Support.** The MAGTF is generally assigned NCF personnel to support any military construction requirements. A MEF-sized MAGTF is supported by a naval construction regiment. Based on Navy policy and agreements between the two Services, the Marine Corps is responsible for logistic support of an NCF beyond its organic capabilities. The Marine Corps supply system is primarily responsible for resupply of these units. However, this supply responsibility begins when the supporting NCF units and their equipment have been marshaled at the port of embarkation. Further information on NCF support and use can be found in MCTP 3-34D, *Seabee Operations in the Marine Air-Ground Task Force (MAGTF)*.

**Religious Services Support.** Religious services support to the Marine Corps is provided by the Navy. It is sustained in the same manner as medical/dental support. Chaplain kits are procured through the Marine Corps supply system. For more information, refer to MCTP 3-30D, *Religious Ministry in the United States Marine Corps*.

### **MAGTF Logistics Integration Program**

The MAGTF Logistics Integration Program initiative focuses on logistic standardization across the MAGTF with specific concentration on convergent practices associated with current expeditionary (afloat and ashore) operations and future operating concepts (e.g., seabasing, Single Naval Battle, enhanced MAGTF operations). The MAGTF Logistics Integration Program integrates the best practices of aviation and ground logistics to increase productivity and reduce workload. When addressing processes, technologies, and people, the MAGTF Logistics Integration Program maintains the correct balance between combat effectiveness and logistic chain efficiency, with an ultimate goal of increasing the MAGTF's readiness.

### **Marine Logistics Group**

The LCE of a MEF-sized MAGTF, the MLG is the primary deployment support agency for a task-organized MAGTF. The MLG consists of single function and multifunction logistic units that can be tailored for sustaining expeditionary operations across the range of military operations. The subordinate regiments respectively focus on generating LCE capabilities.

Given the limited space within amphibious ships, the MLG ensures tailored Class IX blocks augment the operational readiness materiel. This is to optimize the maintenance cycles during amphibious operations by providing responsive organic supply support to the elements of the MEU. The deployed Class IX block typically has its own Department of Defense activity address code (DODAAC) and inventory organization code, and it is normally managed by the CSS component of the MAGTF. The deployed float block—some MAGTFs may deploy with their own block of SECREP items—also typically has its own DODAAC and inventory organization code, and it is also normally managed by the CSS component of the MAGTF.

**Combat Logistics Regiment, General Support.** The combat logistics regiment (CLR) general support (GS) is normally employed as a complete organization in general support of the MEF under the control of the regimental commander. The CLR (GS) provides intermediate-level supply

support, field-level maintenance support, materiel distribution support, procurement management, equipment fielding support, forward resuscitative health care capability to the MEF, and support to specified Marine aircraft wing (MAW) organizations. The CLR (GS) is organized into functional battalions that include supply and maintenance. It is the prerogative of the MAGTF commander to adjust this organization to best support requirements.

The supply battalion is employed to provide general support, intermediate-level ground supply support (less bulk fuel and Navy funded stock/programs), materiel distribution support, and medical logistic support for the sustainment of MAGTF operations. When supporting the entire MEF, intermediate-level supply and materiel distribution management and control are centralized. The battalion also provides task-organized detachments for the sustainment of MAGTF operations smaller than a MEF. Subordinate supply activities include the medical logistics company, ammunition company, and the SMU. The SMU is an intermediate-level supply support element. It is automated in its accounting function. The SMU stocks the materiel necessary to support the MAGTF. The SMU DODAAC and inventory organization code are independently assigned by HQMC and are separate from the battalion DODAAC and inventory organization code that units use to requisition supplies from the SMU's general account (i.e., the account that controls the inventory for the geographical region that the SMU supports). The demand is either filled, backordered, passed to another source of supply, or procured locally. Supply company provides administrative support to the SMU.

The maintenance battalion intermediate-level supply activity is the RIP. The RIP is the focal point for management of SECREP items. Its operation is described as a pool of reparable components located in an area to ensure immediate availability for consumers. It is operated on a direct exchange basis (i.e., unserviceable item exchanged for a serviceable item). The RIP serves as the intermediary between consumer and supporting repair facilities. The RIP DODAAC and inventory organization code are independently assigned by HQMC and separated from the battalion DODAAC and inventory organization code.

Forward-deployed detachments are tailored to organize into combat logistics companies (CLCs) (GS), formed under a common commander, who remains in the operational chain of command of the LCE commander. The SMU and RIP stocks managed at the CLC remain in the MAGTF general account with CLCs adjacent to the CLR direct support (DS) providing administrative and logistic support beyond organic capability. Attachments and other command relationships are tailored for specific operations during planning.

***Combat Logistics Regiment, Direct Support.*** The CLR (DS) coordinates and provides DS tactical logistics to the MEF GCE beyond their organic capabilities. The regiment is normally employed as a complete organization in direct support of the MEF GCE under the control of the regimental commander. The combat logistics battalions (DS) and/or detachments (DS) may be task-organized to support a specific operation or unit. The combat logistics battalions (DS) provides combat logistics to a MAGTF maneuver element of regimental size or smaller, beyond its organic capabilities, in any environment and throughout the spectrum of conflict in order to allow the regiment to continue operations independent of any logistically-driven operational pause.

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# CHAPTER 3

## COMMAND AND CONTROL

Command and control (C2) is the overarching warfighting function that enables all of the other warfighting functions. As it relates to tactical-level logistics and supply operations, command and control synchronizes these subfunctions with the other warfighting functions in order to maximize the impact of support activities in enabling force sustainment. Supply operations are transactional in nature. These transactions tie the Nation's industrial base to the battlefield by registering and fulfilling demands for supplies required to accomplish the mission. Demand fulfillment is enabled by personnel, procedures, and facilities organized under a central commander whose authority directly influences the performance of supply operations through the assigning of appropriate tasks that conform to established tactics, techniques, and procedures.

Marine Corps supply activities are organized to deliver capabilities that fulfill specific portions of the tactical distribution system. These supply activities serve to simplify what is managed by regulating scope and responsibilities. Supply activities further that simplification by forming administrative sections that process transactions and warehousing sections that receive, store, and issue supplies. The distinction between the sections allows for the alignment of manning and training requirements to separate capabilities that can be best controlled within supply. It also enables commanders and their staffs to better measure performance and the effectiveness of decisions as they are carried out.

Effectiveness in command and control of supply operations is defined through the principles of unity of effort and asset visibility and the employment of key performance indicators.

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### UNITY OF EFFORT

Unity of effort requires an understanding of processes throughout the supply system. Understanding the processes leads to a clear delineation of roles and responsibilities, which allows the many different processes of a supply chain to interact seamlessly and achieve a common goal—getting the right supplies to the right place at the right time. In order to measure the impact of decisions in regards to unity of effort, common measures of performance need to quantify production within each process. A unity of effort also requires assurance that the right command nodes have access to pertinent information. Real-time visibility of transaction status, materiel readiness, demand history, and priorities are all examples of pertinent information that increase a shared situational awareness and economy of force.

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## **IN-TRANSIT VISIBILITY AND TOTAL ASSET VISIBILITY**

In-transit visibility and total asset visibility (TAV) for supply operations relate to the responsiveness of a supply system. The location involved and information on hand, as well as the ability to forecast requirements, register unexpected demands, and provide real-time status of demand fulfillment, will directly affect decisions by answering the following questions for commanders regarding their supply needs:

- Where is it?
- How will it get there?
- When will it get there?

In-transit visibility is a capability that uses radio frequency/automatic identification technology to provide the logistic customer with maximum visibility and near-real-time status on the movement of all classes of supply.

In concert with ITV, TAV is the ability to provide users with timely and accurate information on the location, movement, status, and identity of units, personnel, equipment, and supplies. Additionally, it provides inter-Service visibility of consumable and repairable assets within primary and secondary inventory control activities. This inter-Service visibility allows for both lateral redistribution and procurement offsets of assets, as well as associated cost savings.

The environment of combat is fluid and constantly changes, which increases the need for supply transactions to deliver timely updates. Commanders must balance the need for new information with the capabilities of the information management tools by using a disciplined battle rhythm. A battle rhythm is a routine cycle of command and staff activities intended to synchronize current and future operations. The routine allows for information systems to automate low-demand/high-volume transactions updates with a degree of regularity, which sustains the flow of common-user items, thus freeing up personnel to focus on fulfilling high-demand/low-volume transactions and updating information systems accordingly.

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## **KEY PERFORMANCE INDICATORS**

The key performance indicators in military operations that are most important to supply activities measure the precision and rapidness of functions that have a goal of demand fulfillment from the supply chain. The way supply enhances maneuver warfare is through the sustainment of materiel required to meet operational requirements. The following subparagraphs define the indicators that best reflect the supply principles tied to successful maneuver warfare.

### **Responsiveness**

Responsiveness is a measurement relative to the rate a function is performed. Transactional functions measure responsiveness by assessing cycle times between segments of the supply chain. The cycle time of a demand begins once it is processed into the requisition system. Cycle time

ends once a demand is fulfilled or cancelled. Each Service component controls the standard for cycle times for approved retail items; MARCORLOGCOM is the Marine Corps component representative. The DLA controls the standards for cycle times for approved wholesale items across DOD.

### **Reliability**

Reliability is a measurement of quality order fulfillment. In supply, reliability measures the percentage of fulfilled demands out of the total demands registered and is known as the fill rate. Fill rate indicates the probability that a customer's demand can be fulfilled with in-store stocks at the source of supply. There are many different ways to compute a fill rate; the best practice is to filter the indicator to factor only key readiness drivers. This practice will prevent low-cost/high-volume items from giving a false sense of effectiveness. An effectively factored fill rate is a component of adjusting stockage objectives and reorder points to create efficiency.

### **Efficiency**

Efficiency is a measurement of the total resources used to accomplish a task compared to minimum resources required to complete the task. Supply focuses on warehouse minimum and maximum authorized stockage levels to target efficiency. Minimum/maximum values are used in AISs to simplify reorder point and stockage objective visibility. The establishment of appropriate minimum/maximum values requires historical usage analysis reconciled with estimates of future usage requirements generated in planning. Effective minimum/maximum values take into account process and cycle lead times and warehousing capacity to prevent shortfalls while minimizing surplus.

### **Readiness**

Readiness is a measurement of the ability to meet demands. This measurement quantifies the availability of materiel required by a military organization to support its wartime activities or contingencies, disaster relief, or other emergencies. The Defense Readiness Reporting System is the overarching information system that standardizes unit readiness reports. The system categorizes manpower, training, and equipment factors. Manpower readiness is the possession of authorized table of organization (T/O) personnel over the total authorized quantity. The training readiness of LCE personnel influences supply operations. The mission-essential tasks required to meet sustainment requirements are measured utilizing unit training manual policies that govern logistic training and readiness-related tasks. The following three categories of readiness factor into a unit's overall mission readiness:

- *Training readiness.* The number of trained tasks over the total amount of tasks associated with the chained mission-essential task.
- *Equipment readiness.* The possession of authorized table of equipment (T/E), equipment density list (referred to as EDL), or supply stock items over the total authorized quantity.
- *Maintenance readiness.* The amount of mission-essential items that are not mission capable over the authorized quantity.

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## **INFORMATION MANAGEMENT**

Information management is the function of managing an organization's information resources for the handling of data and information acquired by one or many different systems, individuals, and organizations in a way that optimizes access by all who have a share in that data or a right to that information. This enables the commander to better formulate and analyze COAs, make decisions, execute those decisions, and understand the results of previous decisions.

### **Information Requirements**

Effective information management is achieved through the categorization of information requirements that support the commander's decision-making cycle. Supply operations are impacted by the same categorization of information detailed in the Marine Corps Planning Process, although supply activities will primarily use administrative sections in lieu of intelligence resources to collect and report information. Information requirements and their priorities are based on the commander's analysis when problem framing and can be adjusted to meet changes in the situation. The amount of priority information requirements should be limited. Information requirements function as a measure of effectiveness, and effective management of information requirements is the key to efficient information management.

### **Command and Control Nodes**

Information management is critical to decision-making effectiveness. Centralized processing and assessment points should be established to serve as decision-making platforms for the commander. The LCE commander establishes and maintains C2 nodes to systematically respond to information requirements that produce decision points for CSS operations. These operation centers, or command posts, synchronize activities across the LCE. Supply activities establish control points where visibility and accountability information is centralized for reporting. While demands should originate as close to the point of need as possible, the requests should flow to a centralized control point to ensure visibility and demand fulfillment. The following are examples of areas that require platforms to execute supply information management functions:

- Tactical logistic operations center afloat.
- Beach support area.
- Combat service support area.
- Combat logistic support area.
- Landing zone support area.
- Rapid replenishment points.

These areas have supply warehousing activities that utilize inventory controls to process, complete, and close-out transactions as demands are filled or cancelled. To reduce redundant ordering and direct transactions in execution, information flow must be planned and incorporated into training standards.

Areas where transportation functions intersect with supply require distribution management (shipping and receiving) coordination between supply and transportation activities. The MAGTF materiel distribution center (MMDC) and forward distribution liaison cells execute control and reporting of tactical distribution operations as they relate to supply. The MMDC integrates information management functions with the LCE command node to facilitate speed of information updates and control of supplies; therefore, distribution management is viewed as inseparable from supply management functions. Transportation requirements are coordinated via movement control center channels. The primary reference for details on transportation coordination is MCTP 3-40F, *Transportation Operations*.

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## **ROLES AND RESPONSIBILITIES**

The following roles and responsibilities are focused on supply operations within a MAGTF AOR, which includes all Marine Corps controlled supply activities. As a support function, responsibilities in supply are defined in terms of supporting and supported roles. Supported refers to the originator of the demand, while supporting applies to the provider that fulfills the demand. Since C2 functions apply to both supporting and supported roles, respective commanders must ensure their responsibilities are met in order for effective execution of supply operations.

Supported responsibilities include the following:

- Generate requirements.
- Produce accurate and timely logistic status reports.
- Provide information systems access.
- Complete registration of demand and coordinating instructions:
  - ♦ Unit point of contact.
  - ♦ Required supplies.
  - ♦ Preferred distribution method and location.
  - ♦ Required delivery date.
  - ♦ Operational impact or priority.

Supporting responsibilities include the following:

- Validate requirements.
- Ensure information systems readiness.
- Track and manage requisitions/procurement (TAV, ITV).
- Receive, store, and issue (warehousing).
- Fulfill orders.
- Provide personnel to conduct consignment and transfer of custody from supply point through distribution and arrival at point of need.

Property ownership is transferred to a single owner at all times and chain of custody is recorded for supply transactions. Accountability and security of materiel is the responsibility of the current property owner. It is important to note that the agency responsible for reporting ITV and condition is the current property owner. The LCE must ensure there is adequate infrastructure required to affect TAV, but the responsibility for reporting rests equally with the supporting and supported elements. In a combat environment, maneuver and security requirements will be supported by tactical control relationships. Loss caused by mishap or enemy action must be reported by the on-scene commander, regardless of relationship, to the affected unit in order to support timely analysis and decision making for regeneration of demand fulfillment.

# CHAPTER 4

## SUPPLY PLANNING AND EXECUTION

Supply operations encapsulate the sequence of actions and ordered arrangement of forces that have the common purpose of delivering finished supplies to the right place, at the right time, to the right customer. Supply operations tie together the supply support activities discussed in chapter 2 with the C2 concepts discussed in chapter 3. The policies and procedures that govern supply transactions and property accountability are uniformly implemented across the different type operations and operating environments. Specific phases of operations require special consideration in planning and execution in order to ensure uninterrupted sustainment of forces. Likewise, certain operating environments have a distinct impact on the usage and demand of supplies that will be addressed within each class of supply. Course of action development for supply operations during the afloat, ship-to-shore, and sustained operations ashore phases of amphibious operations and during distributed operations of a crisis response SPMAGTF or a security cooperation SPMAGTF will be addressed respectively.

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### PLANNING

The MAGTF staff training program manages reference pamphlets that serve as valuable tools for commanders and their staffs to produce effective products in each step of the planning process. The purpose of the planning process is to create a COA that will accomplish tasks with a desired end state. The main product of the planning process is executable orders. Supply operations are based on the concept of support in an operation order and Annex D (Logistics), the latter of which is the comprehensive plan on how CSS or tactical logistic support functions of the MAGTF will accomplish the mission. Also, the LCE will develop a concurrent operation order to the MAGTF CE plan. The CONOPS of the LCE order will be the comprehensive plan on how the LCE will accomplish the assigned tasks from the CE order.

The MAGTF G-4/S-4 is the primary staff officer who generates the concept of support and Annex D (Logistics) of the CE order. The key inputs required to develop an effective Annex D (Logistics) include commander's guidance, intelligence support to the LCE, estimates by class of supply, and COA development. While these inputs affect transportation, maintenance, services, health services, and general engineering, this chapter focuses on supply operations.

#### Commander's Guidance

The planning process is used as a commander's tool to accomplish formal missions. It requires the commander to make decisions to select a viable COA. Standing operating procedures are used to reduce the amount of material requiring commander's input. Standing operating procedures may address basic loads and mission density lists of equipment and preplanned supplies required to

complete assigned tasks. Where basic loads lack definition or fail to address new requirements, commander's guidance must be solicited to enable initial estimates.

*Note:* Basic loads are defined in terms of DOS or DOA. Contingencies that require capabilities that extend beyond basic loads may be tailored to combat loads to increase feasibility of support for a desired COA. This will allow for refined estimates and requirements determination.

### **Intelligence Support to the Logistics Combat Element**

**Physical Network Analysis.** Physical network analysis includes existing infrastructure in the MAGTF area of operations and area of interest, existing logistic/distribution nodes, major alternate routes, and the capacities of both routes and nodes. Logistic intelligence requirements focus on the study of roads, rails, bridges, tunnels, fords, chokepoints, ports, airfields, and infrastructure and how they tie together in support of logistic operations. Based on the existing infrastructure and the MAGTF's expeditionary logistic capabilities, logistic planners use the doctrinal templates of logistic support COA development to analyze and then design situational templates that support the MAGTF CE's concept of support and the associated, nested LCE CONOPS.

For supply operations, existing infrastructure may possess certain classes of supply, which will reduce requirements that have to be externally sourced, or the existing supply status may be inadequate and increase support requirements. Since supply operations are tied to tactical distribution systems, the existing distribution infrastructure is a planning consideration for ensuring sustainment of the operating forces. Physical network analysis, along with other intelligence support to the LCE, allows for refinement of estimates that will lead to effective procurement schedules.

**Threat Analysis.** Threat analysis is an extensive production effort devoted to supporting CSS operations. The main components of this effort are studies on the local climate, infrastructure, resources, and threat to the rear area and lines of communications. Products from national, theater, and joint task force intelligence agencies contribute to the production effort, but many of these products will have to be tailored by the GCE, ACE, and LCE intelligence sections to satisfy particular MAGTF requirements. During execution, emphasis is placed on rapid processing and production of tactical intelligence to support decision making in the current battle, while at the same time providing detailed intelligence to shape plans for future operations.

Force protection posture and security requirements are estimated and refined based on the threat analysis under the G-3/S-3. While the LCE must maintain an organic local security capability, planning must identify gaps or requirements for augmentation from other components of the MAGTF. Combat support must be apportioned in a manner that balances maneuver and rear area requirements. If a vulnerable rear area is exploited by a threat, sustainment of forward elements may be disrupted with an adverse impact to operations.

**Indications and Warnings.** Indications and warnings can communicate information about threats to supply nodes along lines of communications that serve as supply routes. Decisions can be made to re-route, change defensive or local security posture, or allocate other combat support capabilities

to mitigate the potential threat from impacting sustainment. Logistics combat element units have an organic intelligence capability able to analyze and report relevant indications and warnings.

### **Environmental Considerations for Classes of Supply**

The operating environment must be factored into supply operation and sustainment planning. Requirements must be analyzed to determine priorities of effort for procurement and distribution. For example, offensive operations will place heavy demands on Classes III, V, VIII, and IX because maneuver uses a lot of POL, is hard on equipment, and tends to generate more casualties. Conversely, defensive operations will likely require significant Class IV, and perhaps even Classes I and V, if there is the potential for displacement and maneuver and if the commander wishes to protect CSS assets by placing them further to the rear, creating caches near maneuver units. Similarly, it is likely that stability operations will require Classes I, IV, and X. The best practice for organizing and managing supplies is the implementation of a standard classification system. This system groups like items and assigns codes that will group these items in stock catalogues. This organization also allows for a general analysis of environmental impacts to be applied to planning factors that enhances the reliability of the supply system. The LCE is a source for estimates across the different classes of supply that must be referenced during COA development. For a more detailed discussion on potential environmental impacts to supply operations, see MCRP 3-40B.2, *Environmental Considerations*.

**Class I.** Subsistence and gratuitous health and comfort items considerations and factors are detailed in MCRP 3-40G.1, *Marine Corps Field Feeding Program*. The standard of Class I is to provide three quality meals to each person per day. The physical network analysis and estimates from the procurement officer will provide the availability of locally sourced subsistence. The MAGTF must maintain stocks of packaged operational rations (PORs), UGRs, and the capability to organically provide support to all personnel assigned to the MAGTF AOR in the event of unreliable local procurement. Initial estimates to define Class I requirements need to be based on the T/O of assigned units or, in the event of combined force rotations, on a joint manning document. Commander's guidance will identify to what level of subsistence the providing force must plan when delivering Class I services to displaced persons, prisoners, and others external to the MAGTF.

Coordination with the Marine Corps component food service officer must be conducted to organize and schedule resupplies of Class I that originate from outside the theater of operations. In areas where ground lines of communications may lack mobility due to the terrain or other threats, there will be an increase in the unit stock requirements for Class I. In areas with extreme climate, inventory management may require climate-controlled storage at the user level in order to build out holding capacity since Class I material is more susceptible to spoilage in extreme environments. These Class I considerations create additional requirements in other CSS functional areas that will require coordination to determine the concept of support. Appendix B shows an example of a Class I planning data table.

Marine air-ground task force operations that involve providing subsistence to nonorganic/assigned personnel need to take into consideration the different dietary requirements of the supported personnel. Nutritional and religious considerations will impact storage, handling, issuance, accountability, preparation, and possibly transportation planning and should be analyzed before

committing to support. The Center for Advanced Operational Culture Learning is an information source for units preparing to operate with foreign personnel.

Water is a subclass of Class I. Marine Corps supply operations factor water planning into CSS plans. Water requirements cross the functional areas of food service, health services, and general engineering. Water sustainment for the purpose of food service must plan for the procurement and delivery of nonpotable water on a recurring basis. Requirements will increase in extreme climates, necessitating more frequent replenishment orders and distribution runs. Marine Corps units that possess a water purification capability should place the capability in an area that efficiently serves the tactical distribution chain. Expeditionary operations introduce the MAGTF to austere operating environments. Consequently, these operations depend upon tactical water production assets much closer to the point of use in order to decrease dependency on traditional logistic nodes. While this allows a unit freedom of movement beyond a military logistic apparatus, it presents risk that the physical network analysis should focus on while assessing the local resources in the area of operations. For a more detailed discussion on water planning and operations, see MCRP 3-40D.14, *Water Support Operations*.

**Class II.** Individual equipment, organizational toolsets and toolkits, administrative supplies, and equipment planning considerations originate in the T/O, T/E, and the TAM to determine what organizational supplies and equipment are required to equip a unit. A combat active replacement factor (CARF) is used to determine war reserves that will sustain Class II requirements. The CARF is pre-determined from the enterprise level (HQMC) to assign a quantity needed to keep the forces up to their T/E in the event assets are destroyed or lost in contingency operations. The CARF quantities are established for Type I military equipment designated as combat essential for Class II and Class VII only. During execution, usage reports are used to validate or adjust these rates for future operations. The quality of the reports depends on a disciplined and accurate daily assessment from the using unit. Unit supply activities with effective Class II materiel readiness can procure and preposition replacement stocks to provide responsive support. Replacement issues can be validated using turn-in procedures and standard serviceability code assessments. Poor materiel readiness at the using-unit level will result in unforeseen shortages or surpluses that decrease the overall effectiveness of supply operations.

The Marine Corps transitioned the centralized management of infantry combat equipment; chemical, biological, radiological, and nuclear defense equipment; special training allowance pool; and soft-walled shelters and camouflage netting into the consolidated storage program. The consolidated storage program consists of individual issue and unit issue facilities, with enterprise-wide accountability, visibility, and readiness managed by MARCORLOGCOM. The consolidated storage program reduces the organic supply requirements for a Marine's individual combat issue of gear, a task previously accomplished by each unit's individual organic supply section. When using units requisition stocks from these activities, the responsible officer must ensure proper storage, accountability, and serviceability is maintained. For more information, see MCO 4400.201.

**Class III.** Petroleum, oils, and lubricants are expressed in terms of packaged and bulk products. The T/E provides the amount of equipment requiring fuel. The TAM provides planning for climate conditions, oils, and greases. It also provides a listing of POL and planning data for

all fuel-consuming vehicles and equipment in the Marine Corps inventory. For more information, see MCRP 3-40B.5, *Petroleum and Water Logistic Operations*.

Initial Class III requirements require the implementation of hazardous material controls to mitigate risks to the environment and the operating forces. Hazardous materials planning and execution is tied into Class III plans. Depending on the nature of the operation, the initial phase executed by ground forces may have relatively minimal Class III demands to fulfill, namely due to the process of conducting reception, staging, onward movement, and integration. However, due to the availability of fixed-wing, rotary-wing, and tiltrotor aviation assets to respond immediately, the requirement for aviation fuel may be extensive. This is a planning matter that the bulk fuel planner needs to coordinate with the aviation ground support (AGS) department of the associated MAW or Marine wing support squadron (MWSS) if the operation is below the major subordinate command level. Units must establish Class III distribution points for vehicles and aircraft in the field trains, as required. Tank trucks will be used as far forward as possible. Collapsible fuel drums can be brought forward by helicopter or tiltrotor aircraft. Units must take care to ensure that diesel and motor gasoline fuel drums are available and marked. When circumstances permit the use of tracked vehicles, planning must include additional POL since tracked vehicles normally have a high fuel consumption rate when operating in rugged terrain. Additional lubricants for weapons will also be required due to their greater requirement for cleaning and protection.

Desert terrain can lead to greatly increased fuel consumption per mile moved or per hour that equipment is used. Use of cans or fuel bladders in certain circumstances should also be considered, as they allow fuel to be spread more evenly among cargo vehicles. A loaded fuel tanker's cross-country capability may be degraded in desert sand. When it is determined to be advantageous to employ prepositioned stocks or Class III dumps, secondary containment and hazardous material planning will impact the logistic footprint of Class III. For example, jungle environments may limit the footprint of a Class III distribution point such that storage will require a higher rate of replenishment to sustain operations; on the other hand, a desert environment would allow for a greater footprint, but the footprint must be balanced with the longevity or mobility of the distribution point when the use of leap-frog rapid replenishment points is planned during a long-range assault.

**Class IV.** Construction materials are divided into two separate categories—Class IV(A) for horizontal and vertical construction projects and Class IV(B) for barriers and obstacles. Engineering units will be task-organized for specific capabilities in manpower and equipment. During planning, it must be determined which general engineering and which combat engineering tasks have priority. Analysis of required engineering tasks will generate estimates for manpower and material. The bill of materials for each project on the prioritized engineer project list will address Class IV in the two categories. Examples of tasks that focus on Class IV(A) include main supply route/alternate supply route construction and operating base facilities. Examples of tasks that focus on Class IV(B) include defensive obstacles for countermobility and operating base perimeter barriers for force protection. Class IV requirements will also be influenced by theater standards for force protection and base camp facilities. When determining estimates, the table of authorized materiel control number (TAMCN) provides data on individual engineer construction materials. Automated general engineer construction planning tools allow for calculations and estimates. The AutoDISE [Auto Distribution Illumination System, Electrical] is used to estimate power generation/distribution requirements. It is a Microsoft Windows®-based graphics

application that can be used to support Class IV(B) estimation based upon base camp power generation/distribution planning and concept of employment (for utilities equipment). See Field Manual 4-40, *Quartermaster Operations*, for additional information on AutoDISE.

Initial supplies of construction materials consist of those items transported organically by the Marine Corps operating forces. The LCE may be tasked with bringing additional construction materials to issue, as required. If the Marine Corps operating forces is embarked on amphibious shipping, it may draw construction materials from stocks onboard those vessels. If supported by MPF vessels, the Marine Corps operating forces may draw construction materials from MPF stocks. Once those sources are exhausted, the Marine Corps operating forces may then request further support from the SMU that supports the area of operations. Unplanned requirements exceeding the intermediate capability that cannot be procured through normal supply procedures are met by contingency contracting solutions from the local economy. The Marine Corps component, working in conjunction with the supported combatant commander, may leverage the construction capacity of other Service components and may contract with commercial entities for construction efforts or material support. If the theater develops sufficiently, the joint force commander may establish a unified construction effort to meet Class IV requirements. For more information, see MCTP 3-40C, *Operational-Level Logistics*.

**Class V.** Ammunition, like engineer resources, is also broken into two categories—Class V(A) for aviation-specific ammunition and Class V(W) for all ground ammunition. This publication focuses on Class V(W). Refer to Chief of Naval Operations Instruction (OPNAVINST) 8023.24C, *Navy Personnel Conventional Ammunition and Explosives Handling Qualification and Certification Program*, for information concerning Class V(A). Initial supplies of ground ammunition consist of those quantities transported organically by the Marine Corps operating forces, often referred to as the basic load. The LCE may be tasked with bringing additional ammunition to issue as required. Additionally, if the Marine Corps operating forces is embarked on amphibious shipping, it may draw ammunition from stocks onboard those vessels. If the Marine Corps operating forces is supported by MPF vessels, it may draw ammunition from MPF stocks. Demands that are not filled at those sources are passed to the Marine Corps component commander, who coordinates with other Service components and the combatant commander to meet those needs. The Marine Corps component commander coordinates with PM AMMO [program manager, ammunition] at Marine Corps Systems Command to meet Marine Corps-specific ammunition requirements. Eventually, as the theater matures, the theater commander or joint force commander may establish a unified CUL ammunition effort. (See MCTP 3-40C for more information.)

Initial supplies of aviation ammunition consist of those quantities transported organically by the Marine Corps operating forces. If the Marine Corps operating forces is embarked on amphibious shipping, it may draw aviation ammunition from stocks onboard those vessels. If supported by MPF vessels, the Marine Corps operating forces may draw aviation ammunition from MPF stocks. Requirements in excess of those sources are passed to the Marine Corps component commander, who coordinates with Naval Air Systems Command and the Deputy Commandant for Aviation to meet Marine Corps-specific ammunition requirements. Eventually, as the theater matures, the theater commander or joint force commander may establish a unified CUL ammunition effort. (See MCTP 3-40C for more information.)

Munitions are a dominant factor in determining the outcome of offensive, defensive, and stability operations. Due to limited quantities of precision-guided munitions and associated weapon systems, commanders must manage munitions requirements to ensure availability and to allow for branch planning of suitable substitutes to ensure the unit can meet all mission taskings.

The ammunition logistic system provides the right type and quantity of ammunition in any contingency. The challenge is to move required amounts of ammunition into a theater from the continental United States and other prepositioned sources in a timely manner to support an operation. The system must be flexible enough to meet changing ammunition requirements in simultaneous operations around the world. The objective of the system is to provide configured Class V support forward to the operating forces as economically and responsively as possible with minimized handling or reconfiguring and to quickly adapt to changes in user requirements. The unique characteristics of ammunition complicate the system. These factors include its size, weight, and hazardous nature. Ammunition requires special shipping and handling, storage, accountability, surveillance, and security. It is managed using different methods, depending on the level of command. Using-unit level ammunition is managed using the basic load and mission analysis to compute munitions requirements. The retail level uses projected using-unit requirements and approved supply point stockage objectives to determine munitions requirements. The theater strategic level uses projected using-unit requirements and the joint chiefs of staff-approved munitions requirements process for munitions determination.

Because of the weight and bulk involved, resupply of ammunition and explosives presents a difficult problem. Terrain and climate magnify the problems in ammunition storage. Steep terrain should be avoided when selecting suitable sites for storage. Level, firm ground may become too soft in heavy rain. Rain and intense heat combine to speed the deterioration of containers and ammunition, especially if it is taken out of the packing material. To counteract these conditions, adequate dunnage, shelter, and ventilation must be used. Ammunition in the field trains should be left in packing materials until ready for use. Frequent checks should be made for deterioration of packing material. When the ammunition is unpacked and taken to the field, it is more susceptible to rain, heat, and humidity. Ammunition will degrade in condition; therefore, it must be monitored for serviceability and replacement. While in the field, measures must be taken so that ammunition is never exposed needlessly to the weather. It should be carried in ammunition pouches or containers and protected when stored in positions.

Ground ammunition combat planning factors, compatibility, storage, safety, transportation considerations, and explosive qualification requirements can be found in MCO 8010.13, *Class V(W) Administration and Management Program*. Information concerning aviation ammunition can be found in the OPNAVINST 8011.9B, *Naval Munitions Requirements Process*.

**Class VI.** Personal demand items include sundry items and alcoholic beverages. While the latter will typically not be authorized in forward-deployed areas, the former (sundry packs) should be ordered and stored for use during the initial stages of an enduring operation, prior to the establishment of field exchanges.

**Class VII.** Class VII supplies consist of major end items such as weapon systems and vehicles. They represent a low percentage of total line items but a high percentage of the total dollar value of the Marine Corps inventory. Because of the high dollar cost and their overall importance to

combat readiness, major end items are important to operational effectiveness. The requisitioning, distribution, maintenance, and disposal of these items are intensely managed to ensure visibility and operational readiness. The T/E provides allowances for military equipment in this category. The TAMCN relates to the war reserve stocks via a CARF, which reflects the anticipated combat attrition of equipment on a monthly basis. The CARF determines what is authorized in the war reserve to sustain critical Class VII items.

Storage areas must be designed to protect these items from any environment. Weapons, vehicles, and other items in storage must be inspected more frequently in those environments in which moisture, temperature, or dust will create conditions for rapidly deteriorating the mechanical condition of the item. Protective lubricants must be maintained on all surfaces that can rust. Operational readiness of all stored equipment must be maintained by frequent inspections and maintenance. If excess materiel exists, commanders are recommended to turn in excess items to accommodate shortfalls elsewhere in their respective environment. When major end items are not in use, they are stored or maintained in rear areas. A remain behind element is established to organize and maintain equipment and personnel not required forward. To ensure readiness of equipment in the remain behind element, maintenance and storage plans must be adequate throughout the duration of the operation.

**Class VIII.** Medical supply is designed to support casualties during combat operations to minimize loss of life while maximizing combat readiness. Class VIII requirements must be captured in operation plans (OPLANs), including specific requirements regarding distribution to the final destination. Therefore, OPLANs incorporate into their health service support annex and Annex D (Logistics) Class VIII line item replenishment requirements in anticipation of operations exceeding the standard planning factor, keeping in mind that the AMAL/ADAL blocks initially provide for 15 DOS. Doctrinally, up through day 60, the medical logistics company will have consolidated the additional materiel requirements and have shipped them to forward-deployed units. Beyond day 60, it is expected that the theater lead agent for medical materiel will have reached full operational capability and will assume support for line item replenishment.

The AMALs/ADALs are arranged in a modular concept designed to support specific operational needs of the Marine Corps and assembled to establish a specific health care capability in order to treat specific populations at risk. Medical materiel may be negatively affected by temperature and humidity, which causes deterioration of certain medical materials and pharmaceuticals (e.g., penicillin, hydrocortisone liquids, sulfa liquids). Frequent resupply and replacement of these items may be required. Environmental recommendations related to the storage requirements should be followed to ensure shelf life of the materiel. Storage requirements are provided by the manufacturer.

All medical support elements of a MAGTF have the equipment and medical consumable items sufficient for a projected 15 days (minimum) of combat support operations. Sufficient medical equipment and consumable supplies are initially brought ashore by the personnel of unit medical sections and evacuation sections of the assault echelon. Vehicles, including ambulances dedicated for medical/dental elements, are combat-loaded during mount out and used to bring in initial medical equipment and supplies. Equipment and supplies remaining afloat are phased ashore on demand or as scheduled with ensuing waves of the assault echelon. Company/platoon corpsmen normally receive resupply from their parent aid station. Aid stations obtain resupply through

parent unit supply sections. Platoon corpsmen and aid stations may obtain emergency resupply from supporting companies of the medical battalion, inbound medical evacuation aircraft, or ground transportation.

**Class IX.** Repair parts requirements are based on historical usage data from a MAGTF's intermediate supply activity for consumable and nonconsumable repair items. Nonconsumables are known as SECREPs. These are typically major components of equipment that can be repaired or salvaged for reutilization. To ensure the management of this process is effective, it is managed under the RIP, which falls under the intermediate maintenance activity of the MAGTF. Class IX allowances, termed contingency support packages (CSPs), are tailored to support the units in a MAGTF. The MAGTF's equipment density list is submitted to the intermediate supply activity, which calculates an estimate of repair part requirements based on historical usage data. Because the intermediate supply activity's estimate does not consider specific factors (e.g., operating climates), this estimate should only be used as a starting point to develop and refine the Class IX block. For the purposes of developing a parts block, commanders must incorporate previous experiences and the expertise of their maintenance personnel into its development. The following factors should be considered during repair parts block determination:

- Type and density for equipment to be supported.
- Level of maintenance to be performed by the organizational and LCE maintenance elements.
- MAGTF objective and scheme of maneuver.
- Environmental factors.
- Projected length of operation.
- Other resources in the MAGTF's area of operation (e.g., joint or host-nation support).
- After action reports of MAGTFs deployed to same region.
- Popular demand national stock number (referred to as NSN) reporting.
- Embarkation and lift constraints.
- SECREP exchange process in the Global Combat Support System-Marine Corps (GCSS-MC) for units to open a service request to float components to the RIP.

Planning bills of materials in GCSS-MC is a method by which repair parts may be obtained for a scheduled maintenance project to ensure the necessary repair parts are available and ready for issue far enough in advance to allow for lead-time.

**Class X.** Nonmilitary program materiel (e.g., agricultural tools and equipment) are not required for the conduct of conventional combat operations; however, they are very important in the conduct of civil-military operations. These items should not be stocked unless a unit is actively participating in a civil-military operation. If they are needed, higher headquarters will assign the required levels.

### **Course of Action Development**

The LCE CONOPS and CE concept of support require an operational design step to graphically arrange supply activities during the COA development step of Marine Corps Planning Process.

The following subparagraphs provide design templates that can be applied to specific phases of operations. The approved COA's design will require the following templates to be adjusted for the situation.

**Afloat.** Employment planning for the MEU includes supply operations afloat. The NLI supply support architecture program introduced in chapter 2 serves as the primary model governing MEU supply support. While afloat, the MEU can use the advantages of interfacing with the ATAC distribution system that the Navy uses to sustain its fleet globally. The system is more accurate and responsive in delivering supplies to naval ships afloat than the MEU attempting to reach back to the SMU from the parent MEF. For urgently needed supplies, PMO uses the integrated shipboard information system to expedite demand fulfillment. The MEB aligns with an expeditionary strike group that falls under a numbered fleet commander and geographic combatant commander. For an embarked MEB, NLI concepts will apply; however, a MEB will typically fly-in and utilize the ground line of communications sustainment channels of the theater.

**Ship-to-Shore.** The ship-to-shore phase of an amphibious operation requires detailed planning in the task organization of temporary supply activities ashore. The planning and coordination must put the right personnel, equipment, and communications assets ashore to support the throughput and establishment of the MAGTF. Supply support to this initial footprint is sustained by the landing force support party, with subordinate supply activities at the helicopter/tiltrotor support team and shore party team for the MEU and the shore party group for a MEB. The initial requirements must be determined and procured into scheduled serials with CSPs on-call afloat. The COA development and supply considerations of an amphibious ship-to-shore movement is similar for an MPF off-load. Also, logistics-over-the-shore concepts can be applied to best utilize the supply support activities from the sea base to sustain the landing support operations. In order for this to be effective, information system alignment must be achieved. The Common Logistics Command and Control System (CLC2S) and GCSS-MC system areas are examples of a feasible architecture. Supported units are geographically tied to those supply nodes for sustainment. While tactical communications systems allow for some freedom of movement, modes of transporting supplies forward and lift requirements are a limiting factor, as these resources compete with other landing plan priorities. The transition of supply management from the landing force support party to the LCE must be deliberate, as discussed in chapter 3, to ensure a unity of effort and seamless support. Since regeneration onto the amphibious ready group or maritime prepositioning ship will require similar capabilities, reverse planning the architecture is a best practice.

**Sustained Operations Ashore.** Marine Corps units have organic supply capability. Marine Corps and/or Navy directives and local operating procedures dictate the procedures that units with organic supply capabilities use to request replenishment during an operation or in a combat environment. Likewise, the supply sources ashore will have to establish the means of transporting the supplies for distribution and replenishment.

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## EXECUTION

Supply operations can be looked at in two phases of performance—future and current operations. The transactional events that feed and overlap with this cycle fall under supply management. Future operations include final coordination steps that will result in demand fulfillment. The majority of work will be in transaction management, information management, and allocating distribution resources. Current operations begin once tactical distribution is initiated. This distribution begins with the establishment of a supply point where a transfer of custody is executed to a custodian for the duration of the tactical distribution. Tactical distribution ends once demand fulfillment is acknowledged by verification of requesting unit receipting for requisitioned demand items.

### Future Operations

Future operations are managed between the S-3 of the LCE and the MMDC. Marine expeditionary brigade-level operations require a dedicated staff for managing tactical distribution within expeditionary supply operations. The MAGTF distribution operations center ties together operational logistic throughput and tactical logistic transportation capabilities. While command of the MMDC should fall under the same commander as the SMU, reporting to higher headquarters will be focused on information requirements from the MAGTF distribution operations center.

**Distribution Methods.** The two distribution methods are supply point distribution and unit distribution. The supply point distribution method is when the receiving unit is issued supplies at a supply point (e.g., depot, navigation head, railhead, combat train site, distribution point) and then moves the supplies in organic transportation. The unit distribution method is when the receiving unit is issued supplies in its own area and the transportation is furnished by the issuing agency. The receiving unit is then responsible for its organic distribution. Supported units usually prefer the unit distribution method. However, the MAGTF seldom has enough transportation assets to permit unit distribution to all supported organizations.

**Distribution Method Considerations.** The MAGTF commander usually determines the distribution method used, and the method is reflected in Annex D (Logistics) of the operation order. When supply point distribution is used, care must be taken not to restrict operations for units that have limited organic transportation. When the MAGTF commander selects unit distribution, the LCE/ACE commander must develop a transportation network from the supported organization to the rear supply area that does not generate equipment shortages in rear areas. As a general rule, the MAGTF commander must use a combination of supply point and unit distribution. Highest priority for unit distribution is usually given to engaged units having limited organic transportation. Engaged units having organic transportation are usually the next priority. Units not in contact with the enemy usually receive the lowest priority.

**Types of Systems.** The two types of replenishment systems are pull systems and push systems. Available resources and tactical situations usually dictate that a MAGTF commander use a combination of the pull and push systems.

*Pull Systems.* The pull system utilizes consumer requests in the form of requisition forms. Pull systems will only provide supplies that are ordered by the consumer. Pull systems will tend to be more efficient for the receiving unit with regard to material accumulation and the ability to more rapidly displace should the situation dictate. However, these systems are not anticipatory, so they are not as responsive; instead, they are reactive to a requestor's needs.

*Push Systems.* The push system uses reports (e.g., on-hand or usage reports) to determine the type and quantity of resupply. These supplies are then automatically sent (pushed) to the consumer. Push systems are significantly more responsive to the user as little effort is required to register requirements. Additionally, a push method allows the issuing agency to anticipate and forecast more accurately their resupply needs and thus can keep the supply chain moving. However, push methods run the risk of delivering material to the supported unit that is either unnecessary or of such volume that the supported unit loses its ability to rapidly displace. When using a push method, a best practice is to schedule recurring (e.g., weekly, biweekly) reconciliations with the supported units to assess any potential near-term disruptions or modifications to the existing resupply quantities.

**Replenishment Methods.** The two most commonly used replenishment methods are service station and tailgate issue.

*Service Station.* The service station method is quicker than the tailgate issue method. However, the service station method involves vehicles leaving their tactical positions and entering an established resupply area. The number of vehicles being resupplied at one time is dependent upon the enemy situation or, if on a nonlethal operation, according to available land, staging, or resupply capabilities. The resupply area is designed as a series of resupply points for vehicles when they need resupply service. Traffic flow through the resupply area is one-way to enhance efficiency. Once all vehicles have completed resupply, the vehicles move to the holding area where a pre-combat inspection is conducted (time and situation dependent).

*Tailgate Issue.* The tailgate issue method is normally conducted in an assembly area only. This method places the resupply vehicles at greater risk, but maintains tactical positioning and reduces traffic flow. If the tailgate issue method is used in forward positions, then resupply must be masked by the terrain. This method involves resupply while combat forces remain in their positions. Vehicles stocked with POL and ammunition stop at each individual vehicle position to conduct resupply services. Other general supplies and services such as enemy prisoner of war retention and maintenance are centrally located at fixed sites. Individuals are rotated in much the same manner as the service station for feeding and general resupply.

### **Current Operations**

Current operations are managed under the cognizance of the G-3/S-3. Chapter 3 discussed the nodes that manage current operations, with the LCE operations center as the decision-making focal point. The transition between future and current operations includes a transfer of authority for decision making between an MMDC and an operations center. The operating centers will execute reporting to higher headquarters MAGTF distribution operations center via a movement control center collocated in the command node managing that unit's current operations.

The shift between cycles also comes with the responsibility of real-time ITV. The tactical distribution process contains portions where supplies must be moved along a supply route or line of communications. Expeditionary operations will require these movements within the MAGTF area of operations to occur within the battlespace, regardless of the level of lethality. Tactical control measures are used to support current operations by creating asset visibility and known decision points to allow for commanders to effectively influence outcomes during the execution of support missions in a rapidly changing environment. Decisions should have intended outcomes to deliver supplies to the right place, at the right time, to the right unit, while deconflicting fires and maneuver with other units in the battlespace. While current practices are enhanced with information systems technology, units must exercise communications plans and reporting practices as a secondary means to maintain situational awareness, regardless of the operating environment, in the event of a loss in electronic information systems.

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# CHAPTER 5

## AVIATION SUPPLY SUPPORT

The MAGTF commander needs to be familiar with both ground supply operations and supply operations for aviation. In general, the ACE has unique requirements because sourcing and funding come from both the Navy and Marine Corps supply systems. Organically, two types of logistic support exist for the ACE—the Marine aviation logistics squadron (MALS) and the MWSS. The MALS provides aviation logistic support for the Marine aircraft group (MAG) and to portions of the Marine air control group (MACG). The MWSS provides AGS, EAF support, aircraft rescue and firefighting capabilities, and CSS to the MAG and supporting or attached elements of the MACG. When a task-organized ACE is deployed, the LCE provides logistic support beyond the capability of the MWSS, to include CLCs. This chapter will discuss the organization of the ACE, its organic supply support in each unit, and the unique organizations and programs that are in place to assist the ACE with supply support when deployed. Detailed information about AGS may be found in MCTP 3-20B, *Aviation Ground Support*.

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### AVIATION COMBAT ELEMENT ORGANIZATION

An ACE is organized and equipped to operate in an expeditionary environment. The ACE is a nonpermanent, task-organized element that can typically perform all six functions of Marine aviation in support of MAGTF missions. The MAGTF ACE is comprised of an aviation headquarters with appropriate air control agencies and combat, combat support, and CSS units. The ACE can vary in size and composition in proportion to the size of the MAGTF, consisting of multiple fixed-wing, tiltrotor, rotary-wing, and unmanned aircraft of several types and capabilities. The MAW supports a MEF MAGTF; the MAG, reinforced with a variety of aircraft squadrons and support personnel, doctrinally supports a MEB; and a reinforced squadron with various types of aircraft typically supports a MEU.

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### LOGISTIC SOURCES

Supply operations for the MAGTF ACE are similar to ground supply operations in that there is a wholesale level and a retail level. For the ACE, these levels are generated from the naval supply system. However, naval supply support is only for aviation-peculiar items, such as aircraft parts, airfield items, aviation support equipment, and aviation armament and ordnance equipment. The ground support for the ACE is provided by the MWSS with augmentation from the LCE, as warranted.

**Wholesale Level**

At the wholesale level, supplies are controlled by the Naval Supply Systems Command. Wholesale stock management functions are performed by the Naval Inventory Control Point—Mechanicsburg, the Naval Inventory Control Point—Philadelphia, and the Navy Publications and Forms Center. The inventory manager must maintain adequate wholesale stock levels to support recurring and nonrecurring demand. Stock level forecasts are influenced by cost, military essentiality, current assets, availability of funds, and other information known to the inventory manager. The inventory manager allocates material to stock points based on the inventory control point's ability to forecast stock point needs.

**Retail Level**

Retail level supplies are held within each MALS aviation supply department. Authorized levels of supply are identified in the aviation consolidated allowance list and coordinated shipboard allowance list. Additional allowances for specific, peculiar systems can be found in the various Naval Air Systems Command allowance documents.

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**SUPPLY SUPPORT ORGANIZATIONS**

The MALS and the MWSS are the organic supply support organizations for the ACE. The task-organized MALS provides tailored aviation logistic support while the MWSS provides generalized AGS capabilities, airframe independent. The MALS is a subordinate unit of a MAG and is organized to provide airframe-specific organizational and intermediate maintenance and supply support. An MWSS is a subordinate unit of the MAG and provides all airbase functions of ground support to construct EAFs and/or maintain pre-existing airfields; conduct crash, fire, and rescue; and perform all functions of logistics (short of airbase ground defense), disbursing, legal, and postal in support of the associated MAG. The LCE provides external supply support beyond the capabilities of the MWSS. The LCE provides a menu of capability, from very specific skillset-focused detachments through CLCs, depending upon the requirements and the footprint of the associated MAG/MWSS.

**Marine Aviation Logistics Squadron**

The MALS provides aviation logistic support for the subordinate units of the MAG, as well as logistic support for Navy-funded equipment in support of the MWSS and MACG.

The MALS' capabilities include—

- Providing intermediate-level maintenance on aircraft and aeronautical equipment of all supported units. Performing first-degree repair on aircraft engines, when authorized.
- Providing supply support for aircraft, aeronautical equipment, and Navy-funded programs in support of Marine Corps aviation (e.g., weather equipment, air traffic control equipment).
- Interpreting and implementing aircraft maintenance and supply policies and procedures for the MAG commander.
- Performing inspection and assistance reviews on all aspects of aviation logistics within subordinate units of the MAG.

- Coordinating all planning functions associated with aviation logistics and its deployment, employment, and utilization.
- Maintaining the ability to deploy as an integral unit or as tailored logistic support elements in support of separately employed units.
- Providing assembly and distribution of Class V(A) ammunition.

### **Marine Wing Support Squadron**

As the critical component that gives Marine Corps aviation its expeditionary capability, AGS consists of ground support functions required for sustained air operations (less aircraft maintenance, supply, and ordnance). The 13 functions of AGS directly support the execution of the 6 functions of Marine Corps aviation. The mission of the MWSS is to provide AGS to enable the MAG and supporting or attached elements of the MACG to conduct expeditionary operations. The MWSS supports the ACE by providing the following 13 functions of AGS:

- Internal airfield communications.
- EAF services.
- Aircraft rescue and firefighting.
- Explosive ordnance disposal.
- Motor transport.
- Field messing.
- Essential engineering services.
- Routine and emergency sick call.
- Chemical, biological, radiological, and nuclear defense.
- Aircraft and ground refueling.
- Individual and unit training.
- Airbase/flightline security.
- Airbase commandant functions.

Additional information on the MWSS and the 13 functions of AGS can be found in MCTP 3-20B.

### **Combat Logistics Company**

Combat logistics company support from the MAGTF LCE augments the ACE CSS provided by the MWSS. Specific support requirements are determined, requested, and coordinated by the MWSS. Available CSS capabilities to support the ACE include —

- Transporting fuel, ordnance, and other supplies required by the ACE from the point-of-entry in the MAGTF AOR to the EAF site for distribution by an MWSS.
- Performing the intermediate field level of maintenance on Marine Corps-supported motor transport, engineer, and communications equipment operated by the ACE.
- Providing limited intermediate supply support, including SECREP exchange or shipping.
- Providing postal, disbursing, exchange, legal, and graves registration services.

Aviation ground support that is beyond the organic capability or capacity of the MWSS will be provided by the MAGTF LCE. To provide support for the entire MAGTF, the LCE establishes combat service support areas manned and equipped by the CLC. The MWSS of an ACE will determine the logistic support required from the LCE.

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## **LOGISTIC SUPPORT PROGRAMS**

The logistic support for a MAGTF ACE is provided through a variety of different programs. The MALS are tasked with furnishing aviation-peculiar logistic support. The Marine aviation logistics support program (MALSP), together with the maritime prepositioning ship program and the aviation logistics support ship (T-AVB), provides aviation logisticians the ability to identify and integrate the aviation logistics needed to support all aircraft types that could comprise a MAGTF ACE. Specifically, these programs enable aviation logisticians to identify and integrate the people, support equipment, mobile facilities/shelters, and spares/repair parts needed to support a MAGTF ACE.

### **Marine Aviation Logistics Support Program**

Most Navy-funded logistic support for aviation units is provided under the MALSP. The primary objective of the MALSP is to ensure that required aviation-peculiar logistic support is available for any contingency. The MALSP, together with a number of other programs, provides a standard method of quickly task-organizing aviation logistic support. The MALSP structures aviation logistic support into packages that can be phased into an AOR commensurate with the build up of air power. These CSPs are used as building blocks to keep aircraft operational during every phase of an operation.

Contingency support packages provide necessary people, support equipment, mobile facilities, and spare/repair parts for each MAG/MALS. The spare/repair parts are computed at the combat utilization rate for 90-day duration. The CSPs ensure that adequate common and peculiar support is available for separate/sustained operational commitments when attached to a “host” MALS. The following subparagraphs describe the variety of CSPs.

***Fly-in Support Packages.*** The fly-in support packages (FISPs) can be viewed as “enabling” packages. They provide the organizational-level spare parts support (remove and replace) that allows Marine Corps aircraft to commence flight operations immediately upon arrival in theater. The FISPs are airlifted to the operating site as part of the fly-in echelon (FIE). They are then married with the organizational-level support equipment transported aboard MPF ships or accompanying the aircraft. This combination of assets is capable of providing critical aviation support for 30 days of combat flying.

***Common Contingency Support Package.*** A follow-on to the FISP and/or remote expeditionary support package, the common CSP is the baseline core capability of the intermediate-level support of the deploying MALS.

***Peculiar Contingency Support Package.*** Also follow-on to the FISP, the peculiar CSP is unique to the type/model/series of aircraft and combines with the common CSP to form the MALS intermediate-level capability. Common CSPs and peculiar CSPs combine to provide sustainment for 90 days of combat flying.

***Follow-On Support Package.*** The follow-on support package is a deployable, intermediate-level capability consisting of supply items and support equipment assets that, although not required to initiate the assault, are required to sustain the fight. Due to its size and footprint, the follow-on support package may be phased to a theater of operation, depending on mission requirements and mission duration.

***Remote Expeditionary Support Package.*** The remote expeditionary support package combines with the FISP and provides personnel, support equipment, and additional mobile facilities tailored to sustain the ACE during the first 30 days of operations until the CSPs arrive in theater. For more information see MCTP 3-20A.

***Marine Expeditionary Unit Expeditionary Support Package.*** The MEU expeditionary support package is an organizational-level, only spare parts package built to a standard MEU deckload at a 30-day combat utilization rate. The MEU expeditionary support package is owned, accounted for, stored, and managed at the MALS designated by HQMC Aviation Logistics Support Branch of the Deputy Commandant for Aviation. Deployment of this package requires the MEU commander to request sourcing from the applicable Marine Corps component command.

### **Navy War Reserve Materiel Program**

Navy war reserve materiel in support of Marine Corps aviation is managed by the Chief of Naval Operations under special project codes. These project codes include allowances for forms, publications, flight clothing, support equipment, ordnance support equipment, and repair parts. Specific project codes are identified in OPNAVINST 4080.11D, *Navy War Reserve Materiel Program*. Navy-furnished war reserve materiel is designed to assure the availability of materiel that is not held in sufficient quantity at the organizational level so that it can satisfy requirements in support of MAGTF operations.

### **Aviation Logistics Support Ship, Military Sealift Command Prepositioning Program**

The T-AVB, part of the Military Sealift Command Prepositioning Program, transports critical intermediate level maintenance and supply assets to a forward operating area in support of deployed Marine Corps aircraft. The primary mission of the T-AVB is to provide dedicated sealift for movement of intermediate-level logistic support for use in the rapid deployment of a MAGTF ACE. A secondary mission—to serve as a national asset dedicated to strategic sealift—can be exercised if the embarked MALS intermediate-level maintenance support is phased ashore. To enhance responsiveness, one ship is berthed on the East Coast and another on the West Coast of the United States. Both ships can be configured to allow for tailored intermediate-level repair capability while underway, in-stream, or pierside.

### **Maritime Prepositioning Force Program**

The purpose of the MPF program is to provide fleet commanders deployment flexibility so that an MPF can support missions ranging from combat operations to humanitarian assistance. To achieve

this goal, each MPF squadron is provided limited, organizational-level, common aviation support equipment (Class V[A]) and limited, intermediate-level support equipment.

### **Aviation Ground Support Program**

The AGS program consists of Marine Corps-funded support provided to the ACE by the MWSS. Specific functions center on those services required to sustain airfield operations. Just as a task-organized MALS provides tailored aviation logistic support, each MWSS provides tailored packages of AGS, such as the following:

- *Basic capability package.* Consists of the equipment and personnel required to achieve initial operational capability at a selected main airbase or air facility.
- *Full capability package.* Comprised of equipment and associated personnel not assigned to a basic capability package but required to achieve full operational capability at an existing main airbase or air facility.
- *Site/point package.* Contains the minimum quantities of personnel and equipment required to operate an air site or air point.
- *EAF package.* Consists of the EAF equipment and personnel necessary to establish an EAF or augment/enhance an existing airfield.
- *Aircraft recovery package.* Comprised of aircraft arresting gear and visual aids (e.g., lighting) used to provide an airfield with emergency recovery capabilities. Using a combination of these packages, an MWSS tailors its equipment and personnel to fit the assigned mission. It should be noted that each package represents an initial core capability that can be modified as needed in response to specific circumstances.

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## **SUPPLY SUPPORT FOR EXPEDITIONARY OPERATIONS**

### **Predeployment**

Upon receipt of a mission, the MAGTF commander will develop a COA, force structure, and sequencing plan for forces to arrive in an AOR. When the planning process is complete, the MAGTF commander's staff will commence task organization and organization of forces. Logistic deployment planning is based on the tactical requirements for phasing forces into the AOR. It is during this timeframe that the ACE is task-organized; the tiltrotor, rotary-wing, and fixed-wing MALS and supporting MWSSs are designated; and preparations for deployment begin.

Predeployment logistic actions for an MWSS include the following:

- Develop equipment and personnel requirements utilizing the AGS capabilities packages for time-phased force deployment.
- Coordinate with the LCE to ensure ACE external AGS requirements are captured and sourced.
- Coordinate with the supporting MALS to ensure Navy-funded material in support of AGS operations (e.g., weather, EAF material) is within the timeframe the forces are required in the AOR.

To move ACE logistic support, both airlift and sealift will be utilized. The FIE consists of the following elements to accomplish this support:

- *OPP*. Used during MPF operations. It consists of equipment operators, maintenance, and embarkation personnel. Their mission is to embark aboard MPF ships to prepare equipment for off-load, while in transit to the AOR.
- *Survey, liaison, and reconnaissance party (SLRP)*. Consists of personnel from all elements of the MAGTF. Its mission is to assess areas with potential to support the arrival and assembly phase, evaluate host-nation support, and determine engineering requirements.
- *Advanced party*. A task-organized element that provides the logistic capability for off-load, arrival, and assembly. The OPP and SLRP are absorbed into the advanced party.
- *Flight ferry (referred to as FF)*. Consists of the rotary-wing, tiltrotor, and fixed-wing aircraft capable of self-deployment. This phase involves in-flight refueling, en route maintenance and supply support, and coordination of en route support bases. Rotary-wing aircraft not capable of self-deployment are not part of the flight ferry. Instead, these aircraft are loaded aboard transport aircraft and flown according to their required delivery date.
- *Main body*. Made up of remaining MAGTF units.
- *T-AVBs*. Provide dedicated sealift for the movement of MALS maintenance and supply assets. The ships are normally configured to support intermediate (3rd and 4th echelon) repair while moving to the AOR. Once in theater, the MALS intermediate maintenance activity may operate aboard the T-AVB or be phased ashore.
- *MPF*. In an MPF operation, some ACE logistic assets, such as organizational-level aviation support equipment, aviation ordnance, and transportation assets, will be aboard these prepositioning ships.

The assault follow-on echelon consists of the personnel and equipment required to sustain the assault, but not required to deploy with the FIE.

### **Movement Echelons During Deployment**

The deployment of a MAGTF ACE is executed by forming the total force into movement groups. The following movement groups are developed according to the speed required:

- *FIE OPP*. An MWSS will most likely provide maintenance and embarkation personnel to prepare transportation, engineer, and EAF equipment for off-load.
- *FIE SLRP*:
  - ♦ *MALS*. Representatives of the MALS should be members of the FIE SLRP to reconnoiter potential operating areas and/or facilities at the intended rotary-wing, tiltrotor, unmanned, and fixed-wing sites.
  - ♦ *MWSS*. Representatives from the airfield operations, communications, and engineer operations divisions of the MWSS should be represented in the FIE SLRP.
- *FIE advanced party*. Both the MALS and MWSS should provide CE representatives on the FIE advance party. These personnel ensure proper preparation for arrival and assembly of their respective main body elements and assist with the offload and distribution of ACE assets aboard the MPF ships.

### **Logistic Assets Within Aviation Combat Element Movement Echelons**

Personnel, materiel, and equipment of the tiltrotor, rotary-wing, and fixed-wing MALS and MWSSs are located within the ACE movement echelons. The exact makeup of a MAGTF ACE will determine when and how aviation logistic support is provided and to what degree these assets are employed. It is important to note that the ACE of a MEU is normally embarked aboard an air capable ship (e.g., LHA, LHD). Aviation logistic support is, therefore, the responsibility of the ship. Key MALS employment considerations for MAGTFs larger than a MEU include the following:

- The designated host MALS will normally deploy its CE and organic automated data processing capability (i.e., Shipboard Uniform Automated Data Processing System and Naval Aviation Logistics Command Management Information System [referred to as NALCOMIS]).
- To operate effectively, a MALS must remain stable at the designated site from which its supported aircraft are operating. The movement of a MALS must be planned and coordinated in advance.
- Arrangements should be made to ensure accountability of MALS personnel, equipment, and logistic support assets not deployed. The preferred method is to transfer those assets not being utilized to a remain-behind MALS.
- Employing more aircraft, or flying them more hours, than the FISPs are designed to support will require that logistic assets be drawn from the CSPs and added to these packages.

### **Employment**

The composition and employment of an MWSS depends largely on the CONOPS, the planned operating site of the supported ACE, the anticipated level of LCE support, and the mission requirement to support multiple forward operating bases. Key planning employment considerations for an MWSS include the following:

- *Determining construction requirements.* A requirement for extensive construction material not readily available or locally procurable will significantly increase the embarkation requirements for an MWSS.
- *Determining the number of sites to be supported.* Doctrinally, an MWSS can support more than one site; however, the desired level of support at each site and the distances between sites will have a direct impact on the level of support available.

### **Redeployment**

The procedures used by a MALS and MWSS during redeployment must support the reconstitution of the MAGTF. Redeployment planning is based on the tactical requirements present in the AOR, force time-phasing requirements, and reconstitution requirements.

Logistic actions that occur with a tiltrotor, rotary-wing, and fixed-wing MALS assigned to the ACE during redeployment include the following:

- Reconstituting the FISPs and CSPs and preparing them for shipment.
- Identifying, preparing, and segregating flight ferry support for redeploying aircraft.

- Transferring specific FISPs/CSPs to their parent MALS, which may be accomplished before or after redeployment depending on the operational situation in the AOR.
- Receipting (upon return to their home air station) of those CSPs that were transferred to other activities at the time of employment.

As long as there are air operations, MWSS assets and support will be required in the AOR. As a result, the MWSS will be one of the last units to redeploy. To the greatest extent possible, reconstitution of equipment will occur prior to redeployment. Specific points an MWSS needs to consider during redeployment include—

- Conducting agricultural wash-downs of all equipment and rolling stock prior to embarkation aboard aircraft/ships.
- Conducting limited technical inspections on all equipment with the sourcing aircraft/ship.
- Performing maintenance on all equipment prior to redeployment to the maximum extent possible.
- Returning MPF assets to the appropriate LCE.
- Coordinating with the parent MAW to ensure AGS is properly transferred to the agency providing follow-on logistics.

For further information regarding aviation logistics and AGS, see MCTP 3-20A and MCTP 3-20B.

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# APPENDIX A

## LOGISTICS AUTOMATED INFORMATION SYSTEMS FOR SUPPLY OPERATIONS

### **Automated Manifest System–Tactical**

The Automated Manifest System–Tactical is designed to combine a user-friendly software package and a state-of-the-art hardware system into an efficient, cost effective, and compact shipping manifest and database management system. The Army and Marine Corps share responsibility for the development of this system. The Automated Manifest System–Tactical utilizes the following hardware components: a personal computer, optical memory card reader/writer, optical memory cards, barcode readers, a battery back up uninterrupted power supply, radio frequency tags, and printers.

### **Battle Command Sustainment Support System–Nodal Management**

The Battle Command Sustainment Support System–Nodal Management is a map-centric display on a commercial laptop that provides a technical and visual picture of the battlefield. The Battle Command Sustainment Support System–Nodal Management allows ITV to be graphically displayed on a commonly used software application that is accessible across the entire supply chain. The primary benefit provided by this system is its ability to provide timely information to assist in the decision-making process.

### **Common Logistics Command and Control System**

The CLC2S is a CSS management tool that aids in logistic command and control. It provides the supporting unit the ability to track, task, or forward logistic requests while letting the supported unit track logistic requests from inception to completion.

### **Global Combat Support System–Marine Corps**

The GCSS-MC is the technology centerpiece for logistic modernization in the Marine Corps. It provides accurate, near-real-time, integrated logistic information and enterprise-wide visibility of logistic data, allowing logistic planners and operators to make informed decisions about the logistic chain. The GCSS-MC is built upon a commercial-off-the-shelf product, the Oracle E-Business® suite. The software resides on servers centrally hosted in a Marine Corps data center. The GCSS-MC is accessed from a laptop or desktop computer through an internet-based interface. Based on its internet protocol architecture and infrastructure, GCSS-MC services and applications are accessible to any authorized user from any computer in any operational environment. The GCSS-MC is operationally employed across the spectrum from the garrison to deployed tactical environments within the MAGTF. Through GCSS-MC, a supported unit is able to request and track the status of products (e.g., supplies, personnel) and services (e.g., maintenance, engineering). Further, the supporting unit, via GCSS-MC, has the

ability to request and track the status of inventory and maintenance from higher echelons and conduct tactical and operational CSS mission planning and acquisition functions in support of the Marine Corps mission.

### **Integrated Data Environment/Global Transportation Network Convergence**

The Integrated Data Environment/Global Transportation Network Convergence (IGC) is a partnership between the United States Transportation Command (USTRANSCOM) and DLA in which USTRANSCOM's global transportation network and DLA's enterprise business system have "converged" to provide DOD with an integrated set of networked, end-to-end visibility, deployment and distribution capabilities. The end goal of IGC is to effectively support the joint force commander's ability to make decisions based on actionable logistic information. The IGC creates a single source for DLA and USTRANSCOM to access common, authoritative data; business standards; and information. As the USTRANSCOM ITV system of record, the IGC is synchronized with several other USTRANSCOM distribution process-owner initiatives, such as those found in the Agile Transportation for the 21st Century initiative, which allows commands to consolidate requests into a centralized requirements database.

The IGC leverages existing systems and commercial off-the-shelf technology to eliminate redundancy, streamline access to data, and optimize resources. This results in faster application development to support informed and agile decision making. The IGC's data warehouse results in an improvement from users accessing five (or more) different systems to integrate information to a single source. The IGC can create customizable dashboards, queries, and alerts based on unit information requirements and business rules.

### **Integrated Computerized Deployment System Applications**

There are two main applications that embarkation specialists and mobility officers are required to use to support unit movements. The Sea Service Deployment Module (known as SSDM) provides the capability for the creation of unit deployment lists (known as UDLs), transportation requests, movement tracking outputs, and movement documentation in accordance with the Defense Transportation Regulation (DTR). The Single Load Planner (known as SLP) module provides the capability to construct load plans that are required to support transportation planning and execution. The Sea Service Deployment Module and Single Load Planner are both Enterprise-based systems that provide the capability for embarkation specialists and mobility officers to collaborate and support requirements to obtain, track, and execute unit movements in support of MAGTF operations and exercises. Although there is a standalone version of Integrated Computerized Deployment System (known as ICODES), the ability to collaborate is limited by manual import/export with the Enterprise version in order to effectively communicate in the deployed network austere environment.

### **Navy Enterprise Resource Planning**

Navy Enterprise Resource Planning is the Department of the Navy's financial system of record that uses sophisticated business management software. This system streamlines the Navy's business operations, namely financial management and SCM. The mission of Navy Enterprise Resource Planning is to develop and sustain a business capability that enables the Navy business enterprise to budget, account for, and audit its resources so that it can monitor and make decisions about how the resources are obtained, allocated, and utilized for the benefit of the warfighter.

### **Relational Supply**

Relational supply (RSupply) provides Navy and Marine Corps personnel the tools and functions necessary to perform their day-to-day business: ordering, receiving, and issuing of services and materials; maintaining financial records; and reconciling supply, inventory, and financial records with the shore infrastructure. The major functions of RSupply are divided into the following subsystems:

- *Site*. Contains information on user's own site, serial numbers, user access, validation tables, fund codes, default values, and maintenance data.
- *Inventory*. Provides automated procedures to ensure that physical stock and stock records agree, allowance lists are accurate, usage data is evaluated correctly, and materiel requirements are anticipated. In addition, it provides programs the ability to balance materiel requests against available funds and purge storerooms of stock no longer applicable to supported units.
- *Logistics*. Provides automated procedures to create military standard requisitioning and issue procedure (referred to as MILSTRIP) requisitions, receive and store materiel, issue materiel to supported and nonsupported customers, process incoming and outgoing supply status, process carcass tracking inquiries and replies, and update all logistic data files.
- *Financial*. Provides automated procedures for assimilating and reporting financial credits and expenditures. Provides an automated reconciliation tool for processing of summary filled order expenditure difference listings manually or through a Standard Accounting, Budgeting, and Reporting System (SABRS) management analysis retrieval system file input as well as aged unfilled order listings.
- *Query*. Provides a real-time automated means of querying data required in decision-making, providing status and determining the posture of onboard spares.
- *Interface*. Provides the interfaces required to communicate RSupply information to Organizational Maintenance Management System-Next Generation (referred to as OMMS-NG) and Naval Aviation Logistics Command Management Information System as well as receive data updates.

### **Standard Accounting, Budgeting, and Reporting System**

The SABRS is the accounting system used by the Defense Finance and Accounting Service to standardize accounting, budgeting, and reporting procedures for the Marine Corps' general fund. The SABRS produces general data to support automated and auditable financial statements. It facilitates the preparation of financial statements and other financial reports in accordance with Federal accounting and reporting standards.

### **Web Based Storage Retrieval Automated Tracking Integrated System**

The Web Based Storage Retrieval Automated Tracking Integrated System is a bridging technology solution developed to provide warehouse management and asset tracking and visibility for Marine Corps intermediate supply activities.

### **Total Force Structure Management System**

The Total Force Structure Management System is an enterprise system that combines manpower and equipment data for the purpose of managing the total force. The mission of the Total Force Structure Management System is to serve as the primary data source and business process engine for the activities defined in MCO 5311.1E, *Total Force Structure Process*. This information

system serves the purpose of providing information management and workflow for units to adjust their T/O and T/E to meet operational readiness requirements. As these requirements change, this system needs to reflect changes in a timely manner, as it is the source for forecasting and estimating in logistic planning.

**Total Life Cycle Management–Operational Support Tool**

The Total Life Cycle Management–Operational Support Tool is a decision-making support tool that aggregates emerging, retiring, and current information systems data through a gateway server onto a dashboard-style report overview. Usage, maintenance, and supply data is targeted from other systems and provided for readiness visibility and analysis.

**Transportation Capacity Planning Tool**

The Transportation Capacity Planning Tool is a Web-accessible tool that allows transportation planners to view transportation capacity through personnel, requests, and equipment resources. The Transportation Capacity Planning Tool provides transportation and logistic commanders with a digital dashboard view of their current mission requirements and all available transportation assets, including general engineering and materiel handling equipment.

# APPENDIX B

## PLANNING DATA

### Operational Planning for Rations and Water

Operational planning shall be based on the following ration mix:

- Days 1 through 21 consist of PORs.
- Days 22 through 90 consist of the following computation for the total personnel to be fed:
  - ♦ 20% = PORs, 3 times per day.
  - ♦ 30% = UGR-H&S (hot meal), 2 times per day/PORs, once per day.
  - ♦ 50% = UGR-B (hot meal), 2 times per day/PORs, once per day.

*Note:* UGRs shall be introduced into the feed plan as soon as the situation permits (METT-T [mission, enemy, terrain and weather, troops support available-time available] dependent).

Enhancements are authorized monetary allowances provided to a unit for the procurement of perishable food items that require refrigeration and increase transportation, fuel, equipment, and water requirements. Enhancements are only authorized for use with PORs when PORs are the sole daily diet. They are limited to hot/cold beverages, soups, and fresh fruits and vegetables.

Enhancements are authorized for use with UGRs when the tactical, operational, or logistic situation permits. They are added to UGR-H&S and UGR-B meals to provide a complete menu.

They are limited to breads, milk, cereal, and fresh fruits and vegetables.

Planning Data for Rations			
Ration Type	Content	Weight (lbs) Per Unit	Volume (ft <sup>3</sup> ) Per Unit
MREs	12 meals/case	16.0	0.832
Cold weather	6 meals/box	16.5	0.832
Supplement sundries	100 servings/box	41.0	1.69
A	3 servings/ration	6.54	0.223
B	3 servings/ration	3.83	0.123
Tray pack	36 meals/module	70.0	4.5

Legend

ft            feet/foot

lb            pound

Planning Data for Water								
Function	Hot				Temperate		Cold	
	Tropical		Arid		Sus	Min	Sus	Min
	Sus	Min	Sus	Min				
Universal Unit Level Consumption	6.91	4.87	7.27	5.23	5.26	3.22	5.81	3.77
Role I and II Medical Treatment	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Central Hygiene–Showers	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Mortuary Affairs Operations	2.07	1.87	2.07	1.87	2.07	1.87	2.07	1.87
<b>Potable Total</b>	<b>0.03</b>	<b>0.03</b>	<b>0.22</b>	<b>0.22</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
Centralized Hygiene–Laundry <sup>2</sup>	9.92	7.68	10.47	8.23	8.27	6.03	8.82	6.58
Mortuary Affairs Operations	0.19	0.19	NA	NA	0.14	0.14	0.14	0.14
Engineer Construction	1.98	0.00	1.98	0.00	1.98	0.00	1.98	0.00
Aircraft Maintenance	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Vehicle Maintenance (Non-potable part of UUL)	0.36	0.36	NA	NA	0.19	0.19	0.19	0.19
<b>Nonpotable Total<sup>3</sup></b>	<b>2.93</b>	<b>0.81</b>	<b>NA</b>	<b>NA</b>	<b>2.72</b>	<b>0.60</b>	<b>2.72</b>	<b>0.60</b>
<b>Theater Total</b>	<b>12.86</b>	<b>8.49</b>	<b>12.86</b>	<b>8.49</b>	<b>10.99</b>	<b>6.63</b>	<b>11.54</b>	<b>7.18</b>

Legend

Sus=Sustaining

Min=Minimum

Notes

1–Includes gal/person/day requirements for drinking, personal hygiene, field feeding, heat injury treatment, and vehicle maintenance.

2–Based on a central hygiene goal of two showers and 15 pounds of laundry per Soldier (or Marine) per week.

3–All potable in arid environment.

### Operational Planning for Fuel

A formula to determine the daily consumption rate of fuel is to take the burn rate, or gallons per hour per piece of equipment, multiplied by the hours per day that piece of equipment is expected to operate: (gallons per hour) X (hours per day) = (daily consumption rate) per piece of equipment. Example consumption rates and associated fuel capacities of common assets are provided in the table below. To determine the total daily fuel requirement, add up consumption amounts for each equipment type on-hand.

Planning Data for Drummed Fuel						
	Diesel		Gasoline		Kerosene	
	ft <sup>3</sup>	lbs	ft <sup>3</sup>	lbs	ft <sup>3</sup>	lbs
<b>55-gallon drum</b>	9.0	432	9.0	384	9.0	421
<b>5-gallon can</b>	.8	46	.8	41	.8	45

Legend

ft feet/foot

lb pound

Fuel Consumption Rates			
Nomenclature	Consumption (mpg)	Consumption (mpg)	Distance (miles)
HMMWV	25	14	350
MTVR	80	4.5	360
LVSR	166	2.5	415
M88	400	0.7	280
AAV (all)	171	0.6	102.6
M1A1	See planning data		

Legend

- AAV amphibious assault vehicle
- gal gallon
- HMMWV high-mobility multipurpose wheeled vehicle
- LVSR Logistics Vehicle System Replacement
- M88 recovery vehicle
- mpg miles per gallon
- MTVR medium tactical vehicle replacement
- M1A1 main battle tank

**Note:** An M1A1 tank will need approximately 300 gallons every eight hours; this will vary depending on mission, terrain, and weather. A single tank takes 10 minutes to refuel. Refueling and rearming of a tank platoon—four tanks—is approximately 30 minutes under ideal conditions.

- 0.6 miles per gallon.
- 60 gallons per hour when traveling cross-country
- 30+ gallons per hour while operating at a tactical ideal
- 10 gallons basic idle
- A mine plow will increase the fuel consumption rate of a tank by 25 percent

Fuel Capacity		
TAMCN	Nomenclature	Capacity (gal)
B2085	Fuel SIXCON	900
D0215	M970	5,000

Legend

- gal gallon
- SIXCON six containers together

### Operational Planning for Transport

The lift capacity of helicopters and the weight and volume capacity of cargo netting must be taken into consideration when planning transport of required supplies.

Aircraft Lift Capacity Planning Guidance	
AircraftType	Lift Capacity (lbs)*
MV-22	10,000
CH-53E	30,000

\*Based on standard day conditions (15 °C, sea-level, no wind or humidity) and 1 hour and 45 minutes of fuel onboard.

Legend

°C Celsius  
 CH-53E medium/heavy assault support helicopter (Super Stallion)  
 lb pound  
 MV-22 medium lift, vertical takeoff and tiltrotor aircraft (Osprey)

Cargo Net Capacity Planning Guidance		
Net Type	Cargo Volume	
	ft <sup>3</sup>	lbs
A-22 bag	66	2,500
5,000 net	125	5,000
10,000 net	380	10,000

Legend

ft feet/foot  
 lb pound

### Individual Basic Load—Combat Load Example

The optimum individual combat load is 30 percent of body weight. The three levels of combat load for a unit are individual, sustainment, and contingency.

*Individual Combat Load.* Individual combat loads require the following:

- 4-hour load (combat load):
  - ♦ Individual combat clothing and equipment (ICCE) and weapon.
  - ♦ Helmet.
  - ♦ Weather gear, as appropriate.
- 4-day load (the gear needed to live and fight for 4 days):
  - ♦ ICCE and weapon.
  - ♦ Helmet.
  - ♦ 4-day pack of food.
  - ♦ 4-day toilet kit.
  - ♦ Sleeping gear.

- ♦ Weather gear.
- ♦ Shelter.
- ♦ No spare clothing.
- 4-week load (the gear needed to live and fight for a month):
  - ♦ ICCE and weapon.
  - ♦ Helmet.
  - ♦ 4-week pack of food.
  - ♦ 4-week toilet kit.
  - ♦ Sleeping gear.
  - ♦ Weather gear.
  - ♦ Shelter.
  - ♦ Spare clothing.
- 4-month load:
  - ♦ ICCE and weapon.
  - ♦ Helmet.
  - ♦ 4-month pack.
  - ♦ 4-month seabag.

*Sustainment Load.* Battalion trains carry the following:

- 3 DOS for imminent, future operations.
- Nuclear, biological, and chemical equipment.
- Night vision devices.
- Excess weapons and company armory gear.

*Contingency Load.* Uniforms, personal items and seabags are stored or carried at the division level or left on ship during amphibious operations.

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# GLOSSARY

## Section I. Abbreviations and Acronyms

ACE .....	aviation combat element
ADAL .....	authorized dental allowance list
AGS .....	aviation ground support
AIS .....	automated information system
AMAL.....	authorized medical allowance list
AOR.....	area of responsibility
ATAC.....	advanced traceability and control
C2.....	command and control
CARF .....	combat active replacement factor
CE .....	command element
CLC.....	combat logistics company
CLC2S .....	Common Logistics Command and Control System
CLF .....	combat logistics force
CLR.....	combat logistics regiment
COA .....	course of action
CONOPS.....	concept of operations
CSP .....	contingency support package
CSS .....	combat service support
CUL .....	common-user logistics
DLA .....	Defense Logistics Agency
DOA.....	days of ammunition
DOD.....	Department of Defense
DODAAC .....	Department of Defense activity address code
DOS .....	days of supply
DS .....	direct support
EAF.....	expeditionary airfield
eRMS .....	electronic retrograde management system
FIE .....	fly-in echelon
FISP .....	fly-in support package
G-3 .....	assistant chief of staff, operations/operations staff section
G-4 .....	assistant chief of staff, logistics/logistics staff section
GCE .....	ground combat element
GCSS-MC.....	Global Combat Support System-Marine Corps

GS ..... general support  
GSA ..... General Services Administration  
  
HQMC ..... Headquarters, United States Marine Corps  
  
ICCE ..... individual combat clothing and equipment  
IGC ..... Integrated Data Environment/Global Transportation Network Convergence  
ITV ..... in-transit visibility  
  
JP ..... joint publication  
  
LCE ..... logistics combat element  
  
MACG ..... Marine air control group  
MAG ..... Marine aircraft group  
MAGTF ..... Marine air-ground task force  
MALS ..... Marine aviation logistics squadron  
MALSP ..... Marine aviation logistics support program  
MARCORLOGCOM ..... Marine Corps Logistics Command  
MAW ..... Marine aircraft wing  
MCO ..... Marine Corps order  
MCRP ..... Marine Corps reference publication  
MCTP ..... Marine Corps tactical publication  
MEB ..... Marine expeditionary brigade  
MEF ..... Marine expeditionary force  
MEU ..... Marine expeditionary unit  
MLG ..... Marine logistics group  
MMDC ..... MAGTF materiel distribution center  
MPF ..... maritime prepositioning force  
MPSRON ..... maritime prepositioning ships squadron  
MRE ..... meal, ready to eat  
MWSS ..... Marine wing support squadron  
  
NCF ..... naval construction force  
NLI ..... Naval Logistics Integration  
  
OPLAN ..... operation plan  
OPNAVINST ..... Chief of Naval Operations instruction  
OPP ..... off-load preparation party  
  
PMO ..... priority material office  
POL ..... petroleum, oils, and lubricants  
POR ..... packaged operational rations  
  
RIP ..... reparable issue point  
RSupply ..... relational supply

S-3 ..... operations officer/operations office  
S-4 ..... logistics officer/logistics office  
SABRS ..... Standard Accounting, Budgeting, and Reporting System  
SAC ..... stores account code  
SCM ..... supply chain management  
SECREP ..... secondary reparable  
SLRP ..... survey, liaison, and reconnaissance party  
SMU ..... supply management unit  
SPMAGTF ..... special purpose Marine air-ground task force

T/E ..... table of equipment  
T/O ..... table of organization  
TAM ..... table of authorized materiel  
TAMCN ..... table of authorized materiel control number  
TAV ..... total asset visibility

UGR ..... unitized group ration  
UGR-B ..... unitized group ration-B  
UGR-H&S ..... unitized group ration-heat and serve  
US ..... United States  
USG ..... United States Government  
USTRANSCOM ..... United States Transportation Command

## Section II. Terms and Definitions

**advanced traceability and control**—A closed-loop, transportation hub-and-spoke operation for the collection and consolidation of depot-level repairables that are received from fleet customers and technically screened for repair, stowage, or disposal and then shipped to the appropriate site. Also called **ATAC**. (NTRP 1-02)

**arrival and assembly operations group**—A staff agency composed of the Marine air-ground task force personnel and a liaison from the Navy support element, to control the arrival and assembly operations. Also called **AAOG**. (MCRP 1-10.2)

**assault echelon**—In amphibious operations, the element of a force comprised of tailored units and aircraft assigned to conduct the initial assault on the operational area. Also called **AE**. (DOD Dictionary)

**assault follow-on echelon**—In amphibious operations, that echelon of the assault troops, vehicles, aircraft, equipment, and supplies that, though not needed to initiate the assault, is required to support and sustain the assault. Also called **AFOE**. (DOD Dictionary)

**bill of materials**—A list of all materials needed to complete a structure based on takeoffs and estimates of the materials needed. It includes item number (parts and materials), name, description, unit of measure, quantity, and where called for, the stock size and number, and sometimes the weight. The carpenter uses it when ordering materials. Also called **BOM**. (As contained in this glossary, this term and definition are applicable to this publication only.)

**combat load**—The minimum mission-essential equipment, as determined by the commander responsible for carrying out the mission, required for Marines to fight and survive immediate combat operations. (MCRP 1-10.2)

**combat logistics battalion**—The task-organized logistics combat element of the Marine expeditionary unit. Personnel and equipment are assigned from the permanent battalions of the Marine logistics group. As required, it may be augmented by combat service support assets from the Marine division or Marine aircraft wing. Also called **CLB**. (MCRP 1-10.2)

**combat logistics force**—A force that includes both active Navy ships and those operated by the Military Sealift Command within the Naval Fleet Auxiliary Force that carry a broad range of stores, including fuel, food, repair parts, ammunition, and other essential materiel to keep naval forces operating at sea for extended periods. Also called **CLF**. (MCRP 1-10.2.)

**combat service support**—The essential capabilities, functions, activities, and tasks necessary to sustain all elements of all operating forces in theater at all levels of war. (DOD Dictionary)

**combat service support area**—(See DOD Dictionary for core definition. Marine Corps amplification follows.) The primary combat service support installation established to support

Marine air-ground task force operations ashore. Normally located near a beach, port, and/or an airfield, it usually contains the command post of the logistics combat element commander and supports other combat service support installations. Also called **CSSA**. (MCRP 1-10.2)

**common-user logistics**—Materiel or service support shared with or provided by two or more Services, Department of Defense agencies, or multinational partners to another Service, Department of Defense agency, non-Department of Defense agency, and/or multinational partner in an operation. Also called **CUL**. (DOD Dictionary)

**consumable supplies**—An item of supply (except explosive ordnance) that is normally expended or used beyond recovery in the use for which it is designed or intended. Consumables are accounted for until issued to the end-item or debriefed to the requirement (not simply issues to end-user). (Upon promulgation of this publication, this term and definition are approved for use and will be included in the next edition of MCRP 1-10.2.)

**consumer inventory**—A level of retail inventory usually of limited range and depth, held by the final element in an established supply chain distribution system for the sole purpose of internal support or use. A consumer inventory is independent of echelon of command and can exist at the strategic, operational, or tactical level. (Upon promulgation of this publication, this term and definition are approved for use and will be included in the next edition of MCRP 1-10.2.)

**day(s) of ammunition**—Unit of measurement of replenishing ammunition expressed as a specified number of rounds, or items of bulk ammunition as may be appropriate per weapon, unit, individual kit, set, or using device required for one day of combat. Also called **DOA**. (MCRP 1-10.2)

**Defense Logistics Agency**—A supply support organization assigned management responsibility and control of items in common use by all military services. Also called **DLA**. (NTRP 1-02)

**Department of Defense activity address code**—Authorized military and civil users of the Department of Defense supply system must be registered in the Department of Defense Activity Address Directory and assigned a unique Department of Defense activity address code that serves as an address to permit shipping and billing for materiel and for mailing of documentation. For naval users, the Department of Defense activity address code is the combination of the “Service Designator Code” and “Unit Identification Code” (i.e., V04638) and is used as the first six digits of a standard requisition number. The Defense Activity Address Directory is maintained and administered by the Defense Automatic Address System Center. Navy coordination for Department of Defense activity address codes is carried out by Defense Finance and Accounting Service-Cleveland Center under delegation from the Comptroller of the Navy. Marine Corps coordination is carried out by the Marine Corps Logistics Base, Albany, GA. Also called **DODAAC**. (NTRP 1-02)

**direct support**—A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force’s request for assistance. Also called **DS**. See also **general support**. (DOD Dictionary)

**expeditionary airfield**—A prefabricated and fully portable airfield. The effort and assets (e.g., materiel, engineer support, operational guidance, security) required for the installation/operation of an expeditionary airfield can require the participation/support of all elements of the Marine air-ground task force. Also called **EAF**. (MCRP 1-10.2)

**fly-in echelon**—(See DOD Dictionary for core definition. Marine Corps amplification follows.) Airlifted forces and equipment of the Marine air-ground task force and Navy support element plus aircraft and personnel arriving in the flight ferry of the aviation combat element. Also called **FIE**. (MCRP 1-10.2)

**force sustainment**—Capabilities, equipment, and operations that ensure continuity, freedom of action, logistic support, and command and control. (MCRP 1-10.2)

**General Services Administration**—Responsible for the cataloging and inventory control of 9Q cognizance materiel or nonmilitary items in general use by both military and civilian agencies within the United States Government. Examples of 9Q items include general-use office supplies, hand tools, and cleaning supplies. Also called **GSA**. (NTRP 1-02)

**general support**—That support which is given to the supported force as a whole and not to any particular subdivision thereof. Also called **GS**. See also **direct support**. (DOD Dictionary, part 1 of a 2-part definition.)

**host-nation support**—Civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations. Also called **HNS**. (DOD Dictionary)

**Integrated Data Environment/Global Transportation Network Convergence**—The intransit visibility system of record providing expanded common integrated data and application services enabling a common logistics picture, distribution visibility, and materiel asset/in-transit visibility for distribution solutions. Also called **IGC**. (DOD Dictionary)

**intermediate inventory**—A level of retail inventory required between the consumer and wholesale levels of inventory for support of a defined geographical area or for tailored support of specific organizations or activities. (Upon promulgation of this publication, this term and definition are approved for use and will be included in the next edition of MCRP 1-10.2.)

**in-transit visibility**—The ability to track the identity, status, and location of Department of Defense units, and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; patients; and personal property from origin to consignee or destination across the range of military operations. Also called **ITV**. (DOD Dictionary)

**landing force support party**—(See DOD Dictionary for core definition. Marine Corps amplification follows.) The forward echelon of the logistics combat element formed to facilitate the transportation and throughput operations. In maritime prepositioning force operations, the landing force support party is responsible to the Marine air-ground task force commander for the reception of maritime prepositioned equipment and supplies and personnel at the beach,

port, and arrival airfield, and movement control to the unit assembly areas. Also called **LFSP**. (MCRP 1-10.2)

**landing zone support area**—A forward support installation that provides minimum essential support to the air assault forces of the Marine air-ground task force. It can expand into a combat service support area but it is most often a short-term installation with limited capabilities, normally containing dumps for rations, fuel, ammunition, and water only; maintenance is limited to contact teams and/or support teams. Also called **LZSA**. (MCRP 1-10.2)

**logistics**—(See DOD Dictionary for core definition. Marine Corps amplification follows.)  
1. The science of planning and executing the movement and support of forces. 2. All activities required to move and sustain military forces. Logistics is one of the six warfighting functions. (MCRP 1-10.2)

**logistics combat element**—The core element of a Marine air-ground task force (MAGTF) that is task-organized to provide the combat service support necessary to accomplish the MAGTF's mission. The logistics combat element varies in size from a small detachment to one or more Marine logistics groups. It provides supply, maintenance, transportation, general engineering, health services, and a variety of other services to the MAGTF. In a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to the MAGTF. The logistics combat element itself is not a formal command. Also called **LCE**. (MCRP 1-10.2)

**Marine logistics group**—The logistics combat element of the Marine expeditionary force (MEF). It is a permanently organized command tasked with providing combat service support beyond the organic capabilities of supported units of the MEF. The Marine logistics group is normally structured with direct and general support units, which are organized to support a MEF possessing one Marine division and one Marine aircraft wing. It may also provide smaller task-organized logistics combat elements to support Marine air-ground task forces smaller than a MEF. Also called **MLG**. (MCRP 1-10.2)

**maritime prepositioning force**—A task organization of units under one commander formed for the purpose of introducing a Marine air-ground task force and its associated equipment and supplies into a secure area. The maritime prepositioning force is composed of a command element, a maritime prepositioning ships squadron, a Marine air-ground task force, and a Navy support element. Also called **MPF**. (MCRP 1-10.2)

**maritime prepositioning ships squadron**—A group of civilian-owned and civilian-crewed ships chartered by Military Sealift Command loaded with prepositioned equipment and 30 days of supplies to support up to a maritime prepositioning force Marine air-ground task force. Also called **MPSRON**. See also **maritime prepositioning force**. (MCRP 1-10.2)

**port of embarkation**—The geographic point in a routing scheme from which cargo or personnel depart. Also called **POE**. (DOD Dictionary)

**principal end items**—Those items of equipment necessary for the accomplishment of the Marine air-ground task force mission. Also called **PEIs**. (Upon promulgation of this publication, this term and definition are approved for use and will be included in the next edition of MCRP 1-10.2.)

**retail inventory**—The level of inventory that consists of consumer and intermediate inventories of supplies or materiel held below the wholesale level. (Upon promulgation of this publication, this term and definition are approved for use and will be included in the next edition of MCRP 1-10.2.)

**secondary item**—An item of supply that is not defined as a principal item and includes repairable components, subsystems and assemblies, consumable repair parts, bulk items and material, subsistence, and expendable end items, including clothing and other personal gear. (DOD 4101.01-M)

**stockage objective**—The maximum quantities of materiel to be maintained on hand to sustain current operations, which will consist of the sum of stocks represented by the operating level and the safety level. (DOD Dictionary)

**supplies**—In logistics, all materiel and items used in the equipment, support, and maintenance of military forces. (DOD Dictionary)

**supply**—The procurement, distribution, maintenance while in storage, and salvage of supplies, including the determination of kind and quantity of supplies. a. producer phase—That phase of military supply that extends from determination of procurement schedules to acceptance of finished supplies by the Services. b. consumer phase—That phase of military supply that extends from receipt of finished supplies by the Services through issue for use or consumption. (DOD Dictionary)

**supply chain**—The linked activities associated with providing materiel from a raw materiel stage to an end user as a finished product. See also **supply**; **supply chain management**. (DOD Dictionary)

**supply chain management**—A cross-functional approach to procuring, producing, and delivering products and services to customers. See also **supply**; **supply chain**. (DOD Dictionary)

**survey, liaison, and reconnaissance party**—A self-sustaining task organization formed from the Marine air-ground task force and Navy support element. It conducts reconnaissance, establishes liaison with in-theater authorities, and initiates preparations for the arrival of the main body of the fly-in echelon and the maritime prepositioning ships squadron. The survey, liaison, and reconnaissance party normally deploys to the arrival and assembly area under Marine air-ground task force cognizance. Also called **SLRP**. (MCRP 1-10.2)

**sustainment**—The provision of logistics and personnel services required to maintain and prolong operations until successful mission accomplishment. (DOD Dictionary)

**throughput**—(See DOD Dictionary for core definition. Marine Corps amplification follows.) In logistics, the flow of sustainability assets in support of military operations, at all levels of war,

from point of origin to point of use. It involves the movement of personnel and materiel over lines of communications using established pipelines and distribution systems. (MCRP 1-10.2)

**time-phased force and deployment data**—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. Also called **TPFDD**. (DOD Dictionary)

**total asset visibility**—The ability to access on demand the status and location of any required materiel. Also called **TAV**. (MCRP 1-10.2)

**wholesale inventory**—An inventory (stock), regardless of funding sources, over which the material manager has asset knowledge and exercises unrestricted asset control to meet worldwide inventory management responsibilities. (Upon promulgation of this publication, this term and definition are approved for use and will be included in the next edition of MCRP 1-10.2.)

**Section III. Nomenclature**

- LHA ..... amphibious assault ship (general purpose)
- LHD ..... amphibious assault ship (multipurpose)
  
- T-AG ..... acoustic survey ship (MSC)
- T-AK ..... container and roll-on/roll-off ship(MSC)
- T-AKE ..... dry cargo and ammunition ship
- T-AV ..... aviation logistics support ship

# REFERENCES AND RELATED PUBLICATIONS

## Federal Issuances

### United States Code (USC)

Title X            Armed Forces

### Miscellaneous

Federal Acquisition Regulation

## Chief of Naval Operations Instruction (OPNAVINST)

4080.11\_        Navy War Reserve Materiel Program

8011.9\_         Naval Munitions Requirements Process

8023.24\_        Navy Personnel Conventional Ammunition and Explosives Handling  
Qualification and Certification Program

## Department of Defense Issuances

### Department of Defense Directive (DODD)

5100.1           Functions of the Department of Defense and Its Major Components

## Joint Issuances

### Joint Publication (JP)

4-09             Distribution Operations

### Miscellaneous

DOD Dictionary of Military and Associated Terms

## Army Field Manual (FM)

4-40             Quartermaster Operations

## Marine Corps Publications

### Marine Corps Warfighting Publication (MCWPs)

- 3-40 Logistic Operations
- 5-10 Marine Corps Planning Process

### Marine Corps Tactical Publications (MCTPs)

- 3-20A Aviation Logistics
- 3-20B Aviation Ground Support
- 3-30D Religious Ministry in the United States Marine Corps
- 3-34D Seabee Operations in the Marine Air-Ground Task Force (MAGTF)
- 3-40B Tactical-Level Logistics
- 3-40B.3 Contingency Contracting
- 3-40C Operational-Level Logistics
- 3-40F Transportation Operations
- 13-10K Naval Logistics

### Marine Corps Reference Publications (MCRPs)

- 1-10.2 Marine Corps Supplement to the DOD Dictionary of Military and Associated Terms
- 3-40A.5 Health Service Support Field Reference Guide
- 3-40B.2 Environmental Considerations
- 3-40B.5 Petroleum and Water Logistic Operations
- 3-40D.14 Water Support Operations
- 3-40G.1 Marine Corps Field Feeding Program

### Marine Corps Orders (MCOs)

- 44400.201 Management of Property in the Possession of the Marine Corps—Volumes 1–17
- 5311.1\_ Total Force Structure Process
- 8010.13 Class V(W) Administration and Management Program
- P4400.150\_ Consumer-Level Supply Policy Manual
- P4400.151\_ Intermediate-Level Supply Management Policy Manual

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