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FM 4-40

QUARTERMASTER OPERATIONS

OCTOBER 2013

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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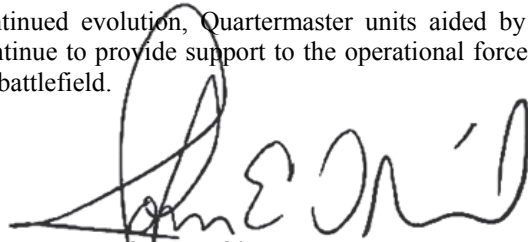
FOREWORD

Field Manual (FM) 4-40 describes Quartermaster operations at all levels to include supply and field service functions. By reading this FM, commanders, staffs, and Soldiers will have an understanding of Quartermaster mission, organizations, and functions and will be better prepared to exercise them in an operational environment.

More importantly, this field manual serves as the bridge between this force and the next, discussing units and systems that are being fielded now and into the near future, including Global Combat Support System – Army (GCSS-Army). While Army transformation to modularity is complete, our evolution will continue as we adjust the Army to new design for the Army of 2020. To support our force, we must focus ourselves on this new environment and apply the same innovation and professionalism that make us successful.

Our most recent and significant advancement is the fielding of the Global Combat Support System – Army. GCSS-Army is an enterprise resource planning tool that provides supply managers across the Army a single database for visibility, anticipation, requisition, and demand satisfaction. Never before has there been a single system that provides the quartermaster or logistician the capability to directly influence the Army supply system and positively affect the outcome of combat operations.

As we progress through continued evolution, Quartermaster units aided by advancements such as GCSS-Army will continue to provide support to the operational force and positively influence the outcome on the battlefield.



JOHN E. O'NEIL IV
BRIGADIER GENERAL, U.S. ARMY
Quartermaster Commandant

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Change No. 1

FM 4-40 (FM 10-1), C1

Headquarters
Department of the Army
Washington, DC, 4 April 2014

Quartermaster Operations

1. This change replaces the cover to align with Doctrine 2015 standards.
2. FM 4-40 dated 22 October 2013 is changed as follows:

Remove Old Pages	Insert New Pages
cover	cover

4. File this transmittal sheet in front of the publication for reference purposes.

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FM 4-40 (FM 10-1), C1
4 April 2014

By order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:

A handwritten signature in black ink, appearing to read "Gerald B. O'Keefe".

GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army
1408602

DISTRIBUTION:

Active Army, Army National Guard, and U.S. Army Reserve: Not to be distributed; electronic media only.

Quartermaster Operations

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***This publication supersedes FM 10-1 dated 11 August 1994.**

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Preface

This publication provides fundamental guidance for the employment of United States (U.S.) Army quartermaster organizations deployed in support of joint and multinational operations across the spectrum of conflict.

The principal audience for field manual (FM) 4-40 is personnel of all grades and levels performing in quartermaster positions. FM 4-40 establishes Army doctrine for quartermaster operations by providing overarching doctrinal direction for quartermaster operations conducted in support of decisive action detailed in other Army manuals. FM 4-40 also provides a foundation for the development of appropriate tactics, techniques, and procedures.

Commanders and staffs of Army headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army will also use this manual.

Commanders, staffs, and subordinates ensure their decisions and actions comply with applicable U.S., international, and, in some cases, host-nation laws and regulations. Commanders at all levels ensure their Soldiers operate in accordance with the law of war and the rules of engagement. (See field manual [FM] 27-10.)

FM 4-40 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. FM 4-40 does not introduce any new terms, rescind any terms or modify any terms.

FM 4-40 applies to the Active Army, Army National Guard/Army National Guard of the United States, and United States Army Reserve unless otherwise stated.

The proponent of this manual is the U.S. Army Quartermaster School. The preparing agency is the U.S. Army CASCOM G3 Training and Doctrine Development Directorate. Send written comments and recommendations on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, U.S. Army Combined Arms Support Command, ATTN: ATCL-TS, Fort Lee, Virginia 23801 or submit an electronic DA Form 2028 by e-mail to: usarmy.lee.tradoc.mbx.lee-cascom-doctrine@mail.mil.

Introduction

Army field manual (FM) 4-40, *Quartermaster Operations*, is the revision of the obsolete FM 10-1, *Quartermaster Principles*. FM 4-40 provides logisticians and field commanders an understanding of Quartermaster principles, organizations, and procedures within the context of decisive action. The manual provides basic doctrinal discussion on the organization and operations of Quartermaster units within the Army.

This manual updates FM 10-1, incorporating modular unit capabilities, designs and concepts, plus updated terminology IAW ADP 3-0 and ADRP 3-0 and other commensurate doctrine into FM 4-40. In rewriting the manual, chapter content on individual commodity areas was consolidated to produce three chapters from 19 chapters: one covering fundamentals, one covering all supply functions, and one covering field services. The net effect was to reduce the manual from ~130 pages to ~ 60 pages. Other key changes in this manual include the addition of a foreword to highlight the importance of the Global Combat Support System – Army, the identification of strategic partners that support Quartermaster functions, expanded discussion of supply chain management, and operational energy. The FM also addresses modernization in both the aerial delivery and mortuary affairs force designs. The manual also further expands on the two Quartermaster core competencies; supply and field services.

FM 4-40 contains three chapters:

Chapter 1 provides an overview of Quartermaster Operations. This chapter describes the Quartermaster functions, enabling organizations and mission command systems. The fundamentals of logistics command systems and how they enable commanders to gain a common operational picture is also noted. Chapter 1 defines support relationships, management functions, and requirements for total asset visibility.

Chapter 2 discusses supply operations, reviews classes of supply, discusses multi-modal operations, and establishes an overview for unit supply operations. Specifically, mentioned are distribution hubs, supply support activities, accountability and responsibility, property records, inventories, and adjustments reports.

Chapter 3 discusses Quartermaster Field Service Operations and how they are employed and generate combat power for the combatant commander. The chapter provides a brief overview of aerial delivery, clothing and textile repair, food services, shower and laundry, mortuary affairs, water purification, and force provider.

FM 4-40 was developed in close coordination with the United States Army Combined Arms Support Command and Quartermaster School. Quartermaster Warrant Officer Advanced Course Students provided input based on their personal experiences as well as comments and input taken throughout the Army sustainment community.

FM 4-40 does not introduce, modify or rescind any Army terms or acronyms.

Chapter 1

Quartermaster Operations Overview

The Army logistics capability has been modernized to provide the best possible support to Army units operating as part of a joint force. Logistic operations are conducted through unified operations in a complex, interconnected, and increasingly global operational environment encompassing air, land, maritime, and the information environment. It is within this setting that quartermaster units support Army, joint or multinational forces; providing supported forces with the right equipment, supplies, and support; in the right place; at the right time; and in the right quantities. This chapter discusses the quartermaster operational environment to include enabling organizations, mission command systems, management functions, support relationships, and asset visibility.

SECTION I – INTRODUCTION

1-1. The United States (U.S.) military has evolved dramatically as a result of increasing strategic challenges, combat experience, and technological change. This evolution has transformed operations from loosely linked, Service-dominated operations into fully integrated, mutually supportive operations.

1-2. Today, a geographic combatant commander (GCC) can bring every Service component's capabilities to bear in any environment; and the influences of other government agencies have greater effect on military operations than in the past. These operations vary by geo-political region and situation but often include complex situations in which conventional and unconventional operations occur simultaneously.

1-3. Today's operations require Army forces to respond rapidly with forces that move quickly and commence operations immediately upon arrival in a theater of operations. To meet this operational requirement, Army forces have been redesigned with better expeditionary qualities than that of post cold war Army organizations.

Note. Post Cold War Army organizations were not as flexible and responsive to operational requirements as required. They met GCC needs, but at high costs in organizational turbulence, inefficiency, and slower response times than desired. This difficulty in using existing formations, coupled with the need to employ land forces immediately with little time to reorganize after deployment, made the need for organizations with better expeditionary and campaign qualities unmistakable.

1-4. From a logistics perspective, the solution to the problems referenced above included centralizing mission command of logistic functions, thereby reducing redundant command layers and functions; ensuring a more self-reliant combat force through improved brigade combat team (BCT) logistic capabilities; and modular quartermaster unit designs to better support Soldier requirements.

1-5. Improvements in command capabilities have multiplied the effectiveness of quartermaster organizations. For example, support operations have become more dispersed across greater distances when conducting stability operations, which makes more efficient in the use of limited resources. With emerging systems and lessons learned, the Army support structure is more capable of maintaining asset visibility throughout the intra-theater distribution system.

1-6. Capabilities previously resident echelons above brigade now resident in the maneuver BCTs to include: water production and distribution, ammunition holding, and increased transportation capabilities.

These expanded capabilities improve brigade self-reliance capabilities and enable throughput of supplies directly from theater distribution hubs.

1-7. At echelons above brigade, modularity enables theater sustainment command (TSC) logisticians to task organize and tailor logistic capabilities to meet specific mission requirements. This capability provides the means to employ purpose-built capabilities without resorting to ad hoc task forces and avoids the resulting inoperable remnants normally associated with ad hoc structures. The end result is increased flexibility and agility to meet GCC requirements.

1-8. And finally, at the strategic level, the Army is committed to an enterprise solution for integrated logistics processes, the ability to support collaborative planning and forecasting, and an overarching architecture integrated within the joint business enterprise.

SECTION II – QUARTERMASTER FUNCTIONS

1-9. Quartermaster operations are comprised of two functions: supply and field services. From an operational perspective, supply enables freedom of action, extends operational reach, and prolongs endurance. The other provides quality of life for Soldiers conducting operations in any operating environment. Both are essential to effectively and efficiently sustaining Army forces.

SUPPLY

1-10. Supply is the process of providing all items necessary to equip, maintain, and operate a military command. It involves requesting, receiving, issuing, and maintaining or establishing accountability of individual, organizational, and expendable/durable supplies and equipment that is required to execute a unit's assigned mission.

1-11. Supply support to operations begins at the (Department of Defense) DOD level and continues to the end user through each services supply support system. The DOD supply chain is a global network that delivers materiel to the joint force. Its fundamental goal is to maximize force readiness while optimizing the allocation of resources. The logistic capabilities that contribute to the DOD supply chain includes fulfillment of commodity requisitions from supply, the distribution capabilities from deployment and distribution, and movement and retrograde of repairable items to support maintenance activities. Additionally, multinational partners, interagency, HN, NGOs, and other organizations may be segments within, or the end users of, the supply chain. Supply chain responsiveness and reliability are critical to the overall success of joint operations. For more information see JP 4-0, Joint Logistics.

1-12. The Army supports the DOD supply chain management system through distribution management. Distribution management is a system that synchronizes and coordinates a complex of networks (physical, communications, information, and resources) and the sustainment warfighting function to achieve responsive support to operational requirements. Distribution management includes the supply chain functions of transportation, manpower, and movement control, warehousing, inventory control, order administration, site and location analysis, packaging, data processing, materiel management, people, and communications. For more information see ATTP 4-0.1, Army Theater Distribution.

1-13. The distribution management center is responsible for integrating the supply chain, distribution and material management activities and processes. The primary objective for materiel management is to provide effective and efficient supply support to meet operational requirements from the tactical level to the industrial base. Materiel management addresses all internal and external processes, information and functions necessary to satisfy an operational supply requirement. GCSS-Army, once completely fielded, will serve as the information management tool.

1-14. Global Combat Support System-Army (GCSS-Army) is the principal and comprehensive logistics automation enabler for the Army. The GCSS-Army Enterprise Resource Planning (ERP) solution provides a single system with a single data base for anticipating, allocating and synchronizing the flow of supplies in support of combatant commanders. It integrates enterprise information and provides all echelons access to critical logistics information used to support distribution and materiel management that may affect the outcome of combat operations, combat power generation and planning for future operations. GCSS-Army provides essential operational sustainment capabilities to staffs and commanders at all levels in areas of

materiel management, maintenance management, and property accountability within an enterprise environment. The impact of GCSS-Army is that it allows all logistics commanders, staff and operators to have viable input to the overall supply system. All contributors have the ability to influence the system and its ability to satisfy the demands of the operational force

FIELD SERVICES

1-15. Field services help to provide an adequate quality of life for soldiers in the field in terms of feeding, billeting, hygiene services, and morale and welfare activities. The type and level of field services support provided differs depending upon a supported commander's requirements and the existing infrastructure in a theater, theater of operations, or joint operations area (JOA).

1-16. Field services include aerial delivery, clothing and light-textile repair, food service, shower and laundry, mortuary affairs, and water purification. These services enhance unit effectiveness and mission success by providing for Soldier basic needs. Quartermaster Soldiers provide these services through a variety of organizations that provide field service support at the tactical and operational levels. Field services are discussed in greater detail in Chapter 3.

SECTION III – STRATEGIC PARTNERS

1-17. . It is critical that Quartermaster leaders and commodity managers understand the strategic partners that may support operations. Each partner, the type of support provided, and coordination points of contact must be understood and leveraged. Quartermaster operations in any AOR require close coordination with strategic partners and sustaining unified land operations requires synchronization with those enabling agencies. It is imperative that commanders and staffs understand what each partner contributes to sustaining the fight. The TSC and/or expeditionary sustainment command (ESC) normally serve as the central conduit for coordination and synchronization with strategic partners. Some of those key enabling organizations are described below.

DEFENSE LOGISTICS AGENCY (DLA)

1-18. DLA is the DOD strategic logistics provider and provides support for supply classes I, II, III, IV, VI, VII and IX. DLA is a primary source for class III bulk petroleum supplies. DLA supports each GCC with a DLA contingency support team (DCST) as its focal point for coordinating DLA activities throughout the theater. The DCST works directly with quartermaster organizations and other logisticians and integrates materiel management support of DLA common commodities such as subsistence, clothing and other general supplies. The DCST provides disposal support as appropriate including the disposal of hazardous waste. The DCST also provides contract administration services and support through attached Defense Contract Management Agency (DCMA) elements. DLA elements are often co-located with sustainment headquarters. Quartermaster organizations must be aware of these elements, the types of commodities supported by each, and understand the coordination requirements to leverage them. In some instances, DLA may provide supplies directly to using units.

DEFENSE CONTRACT MANAGEMENT AGENCY (DCMA)

1-19. DCMA is a separate agency under DOD and deploys its own command structure when supporting contingency operations. DCMA provides significant reach back support to quartermaster organizations and other sustainment managers during operations requiring contracting services. DCMA is responsible for assuring that procured materiel and services are satisfactory and delivered when and where needed.

UNITED STATES TRANSPORTATION COMMAND (USTRANSCOM)

1-20. USTRANSCOM is the functional combatant command responsible for strategic distribution of all classes of supply into an area of responsibility. It provides and manages strategic common-user airlift, sealift, and terminal services worldwide. USTRANSCOM's deployment distribution operation center (DDOC) is USTRANSCOM's single focal point for all combatant command and major shipping customers. Quartermaster organizations and other logistics managers coordinate with the

USATRANSCOM DDOC for visibility of strategic distribution. USTRANSCOM may also provide strategic theater opening enablers to assist in setting sustainment conditions early on when initially establishing areas of operations, including playing a key role in logistics over the shore operations when required.

MILITARY SURFACE DEPLOYMENT AND DISTRIBUTION COMMAND (SDDC)

1-21. SDDC is the Army Service component command (ASCC) of USTRANSCOM and is DOD's single port manager (SPM) at the seaport of embarkation (SPOE) and the seaport of debarkation (SPOD). SDDC performs SPM functions necessary to support the strategic flow of the deploying forces' equipment and supplies to and from the theater, including logistics over the shore operations when required. In carrying out this responsibility, SDDC works closely with quartermaster and other sustainment managers to coordinate the arrival, discharge, or loading of vessels in accordance with GCC priorities. SDDC and sustainers work together to provide a seamless strategic/theater interface and provide for the efficient reception, staging, onward movement, and integration (RSOI) of supplies to and from the theater. Continuous coordination and collaboration facilitates integrated and synchronized operations throughout the distribution system.

UNITED STATES ARMY MATERIEL COMMAND (USAMC)

1-22. USAMC provides support to deployed Army forces through its subordinate Army sustainment command (ASC), life cycle management commands (LCMC), Army Contracting Command, and other subordinate activities to provide a seamless approach to linking the national sustainment base with deployed Army forces. In addition to supporting quartermaster and other support operations managers, USAMC assets within a theater may also provide acquisition, life cycle logistics, and technology support to joint, interagency, intergovernmental, and multinational (JIIM) forces as directed by the Army Service component commander.

ARMY SUSTAINMENT COMMAND (ASC)

1-23. ASC is the Army's lead materiel integrator. In supporting deployed Army forces, the ASC is responsible for assisting the Army's logistics information warehouse (LIW) in maintaining asset visibility and assisting quartermaster and other sustainers with the coordination the Army's overall materiel management system from the national sustainment base to the geographic theater. The ASC also optimizes the USAMC Logistics Assistance Program in support of contingency operations and works closely with key DOD strategic partners, specifically USTRANSCOM and DLA to ensure the Army national sustainment base is properly integrated into the joint deployment distribution enterprise (JDDE) and that the national supply system effectively supports deployed Army forces.

ARMY FIELD SUPPORT BRIGADE (AFSB)

1-24. The AFSB (outside continental United States) provides integrated and synchronized national-level sustainment support to deployed Army forces. The AFSB is regionally aligned to an ASCC and focused to serve as Army sustainment command's bridge between the generating force and the operational force. The AFSB works closely with quartermaster and other logistics managers and is responsible for the integration and synchronization of USAMC national-level sustainment capabilities in support of operational and tactical level commanders during the conduct of unified land operations.

UNITED STATES ARMY CONTRACTING COMMAND (USACC)

1-25. USACC is a major subordinate command of USAMC. USACC responsibilities include contracting, mission command, and management authority over theater support contracting and the Logistics Civil Augmentation Program (LOGCAP). All theater contracting units are assigned to and receive contracting authority from USACC to support quartermaster and other sustainment managers.

JOINT MUNITIONS COMMAND (JMC)

1-26. The Joint Munitions Command (JMC) serves as the DOD field operating agency for the single manager for conventional ammunition mission. The JMC manages the production, storage, issue and demilitarization of conventional ammunition for all U.S. military Services – Army, Navy, Marine Corps, Air Force, and Coast Guard. JMC is the logistics integrator for life-cycle management of ammunition; providing a global presence of technical support to U.S. forces, especially quartermaster and other sustainment support operations managers.

1-27. Quartermasters may be required to support stability and humanitarian support operations that are often sustainment intensive. In these operations the command and staff may be required to work closely with or directly support intergovernmental, non-governmental and other agencies. This support may include inter/intra theater sea and airlift, ground transportation, provision of equipment and supplies and, port operations. This support must be specifically authorized by the secretary of defense. Quartermaster sustainment managers must remain familiar with the legal authorizations to provide support to U.S. agencies, the United Nations, Inter/non-governmental organizations and multinational forces. ADRP 4-0 provides greater detail on inter-governmental organizations and interagency coordination

THEATER SUSTAINMENT COMMAND (TSC) AND EXPEDITIONARY SUSTAINMENT COMMAND (ESC)

1-28. The theater sustainment command (TSC) serves as the senior Army sustainment HQ (less medical) for the Army Service component command. A TSC can deploy an ESC when the TSC determines that a forward command is required.

THEATER SUSTAINMENT COMMAND (TSC)

1-29. The TSC is capable of planning, controlling, and synchronizing operational-level sustainment to include quartermaster support functions for the ASCC or joint force command. It provides a centralized logistics command structure for the Army Service component command; simultaneously supporting deployment, theater opening, distribution, sustainment, redeployment, reconstitution, retrograde, theater closing, and reconstitution through supply and field services.

1-30. The TSC plans and executes the basic quartermaster functions of supply and field service support for the Area of Responsibility (AOR). It executes its mission through the use of modular forces, to include expeditionary sustainment commands (ESCs), sustainment brigades (SBs), combat sustainment support battalions (CSSBs), and other modular sustainment organizations.

1-31. As required by mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC), the TSC may extend its operational reach by deploying one or multiple ESCs into specified areas of operations (AO) and JOA in order to more effectively provide adequate supply and field service support to Army forces. The TSC maintains oversight of sustainment operations within the AO and JOA with direct coordination with the ESC and its sustainment information systems. This capability provides the TSC commander with the regional focus necessary to provide effective operational-level support to Army or joint task force (JTF) missions. Its purpose is to build and sustain combat power through agile and responsive AO and JOA-wide support.

EXPEDITIONARY SUSTAINMENT COMMAND (ESC)

1-32. The ESC provides mission command for attached units that provide sustainment operations to include supply and field services in a specified area of operation as defined by the TSC. The ESC provides operational reach and improved span of control. The ESC plans and executes sustainment, distribution, theater opening, and reception, staging, and onward movement for Army forces.

1-33. The role of the ESC is to deploy to an AO and JOA and provide mission command capabilities when multiple sustainment brigades are employed or when the TSC determines that a forward command is required. The ESC is normally attached to a TSC but may be employed directly under the mission command of the corps, Army forces (ARFOR), or JTF as designated by an appropriate order.

SUSTAINMENT BRIGADE

1-34. Sustainment brigades provide mission command of sustainment units conducting theater opening, theater distribution, and sustainment operations.

1-35. The sustainment brigade materiel management effort is focused on the management of its supply support and field services (aerial delivery, clothing and light-textile repair, food service, shower and laundry, mortuary affairs, and water purification) in accordance with TSC plans, programs, policies, and directives. The sustainment brigade may also provide fuel and water through oversight of stockage areas such as bulk fuel and water storage areas. The sustainment brigade coordinates and controls supply functions, including the redistribution of intratheater excess to meet the operational requirements of the TSC and its supported units. Greater detail on these missions and organization of the sustainment brigade is provided in ATP 4-93.

COMBAT SUSTAINMENT SUPPORT BATTALION (CSSB)

1-36. The CSSB is the building block upon which TSC capabilities for sustainment execution are developed. Typically attached to a sustainment brigade, the CSSB is tailored to meet specific mission requirements. Attached quartermaster capabilities may include supply, mortuary affairs, airdrop, field services, water, and petroleum.

1-37. Employed to support on an area basis, the CSSB plans, coordinates, synchronizes, monitors, and controls quartermaster operations (supply and field services) within a specified AO; supporting units in or passing through its geographic area.

1-38. A CSSB could be aligned to provide general support to a corps or division in an area of operations. Supply and field services would be coordinated with the G4 to provide operational or strategic level support from higher echelon elements exceeding the CSSB's capability.

1-39. When supporting brigade combat teams, the CSSB may be specifically task organized with a quartermaster composite supply company that provides water purification and non-mobile petroleum storage support. When supporting multifunctional or functional support brigades performing Corps missions such as out-of-sector operations, the CSSB will be task organized with the same composite supply company. In this instance if the supported brigade is a fires brigade, the composite supply company may be task organized with an ammunition transfer and holding point for munitions support.

BRIGADE SUPPORT BATTALION (BSB) AND AVIATION SUPPORT BATTALIONS

1-40. BSBs are organic to BCTs, and select multifunctional support brigades. ASBs are organic to the combat aviation brigades. Although BSB capabilities and structure differ somewhat depending upon the type of BCT all are designed to provide direct support to its supported brigade. BSBs provide responsive support to the brigade by positioning forward support companies (FSCs) with maneuver and fires battalions. BSBs without FSCs provide sustainment by task organizing logistics assets to support specific units and missions based on METT-TC. The type of support may vary by battalion based upon the situation and support requirements.

1-41. Brigade support battalions within a brigade plan, coordinate, synchronize, and execute logistic operations in support of brigade operations. They will also provide area support within the limits of their capabilities to other elements operating in the brigade AO, such as SOF elements. Functional support brigades, such as air missile defense brigades do not have a BSB in their structure. As a result, they do not possess the same degree of self-sustaining operational endurance as a BCT or multifunctional support brigade and will be more reliant on sustainment brigades and CSSBs for support.

1-42. BSB QM capabilities include receipt, store, and distribute supply classes I, II, III, IV, V, VII, and IX; stores and distributes potable water; and provides food service. In general, the BSBs and ASBs maintain visibility of the theater distribution system, synchronizing the flow of throughput into the brigade's operational area.

FORWARD SUPPORT COMPANY

1-43. The role of the forward support company (FSC) is to provide direct logistics support to the supported battalion. The quartermaster capabilities provided by the FSC are field feeding, bulk fuel, and general supply. The FSC provides the supported commander with dedicated logistics assets organized specifically to meet the battalion's requirements. The FSC commander receives technical logistics oversight and mentoring from the BSB or aviation support battalion commander. Forward support company core QM capabilities include field feeding and supply distribution.

FUNCTIONAL QUARTERMASTER ORGANIZATIONS

1-44. The following is a list of current quartermaster functional organizations that support Army operations. The normal basis of attachment is indicated and these units may be attached in any combination as required by the operations order. Distances, types of equipment, and quantities identified in the following paragraphs are for general planning purposes and may vary widely depending on the actual operational environment.

PETROLEUM PIPELINE AND TERMINAL OPERATING BATTALION

1-45. Petroleum pipeline and terminal operating battalions are normally attached to a sustainment brigade. Petroleum pipeline and terminal operating battalions are responsible for the operation and maintenance of a military petroleum distribution system that may include ports of entry, pipelines, tank farms, and tactical marine terminals.

1-46. Their mission is to provide mission command, administrative, and technical supervision for the operation and maintenance of a military petroleum distribution system. Core capabilities include:

- Commanding two to five petroleum pipeline and terminal operating companies and other assigned or attached units supporting the pipeline and terminal operation.
- Planning, controlling and supervising the operation and maintenance of 375 miles of multi-product pipeline and related terminal activities.
- Supervising petroleum quality surveillance and operating a mobile petroleum products laboratory.
- Operates a central dispatching agency to schedule and direct the flow of bulk petroleum through multi-product pipelines and coordinating the movement of bulk petroleum products by barge, rail, and truck.

PETROLEUM SUPPLY BATTALION

1-47. Petroleum supply battalions are normally attached to a sustainment brigade. They serve as the link between the pipeline systems and supply units in their specified AOs.

1-48. Petroleum supply battalions provide petroleum supply support and may also store a portion of theater petroleum (reserve) stocks. The battalion distributes to echelons above brigade petroleum, oils and lubricants (POL) support units and may go as far forward as brigade support areas when required.

1-49. Petroleum supply battalions receive bulk petroleum via pipeline, rail, truck, or barge from terminals operated by a petroleum pipeline and terminal operating battalion. These battalions receive, store, and transfer bulk petroleum. They operate 5,000- or 7,500-gallon tankers and, when feasible, rail cars or barges to distribute bulk fuels. When required, they can also provide bulk and retail supply support.

1-50. Their mission is to provide mission command, administrative, and technical supervision over attached petroleum supply companies and petroleum truck companies. Core capabilities include:

- Commanding two to five petroleum support companies and transportation truck companies (POL).
- Planning for the storage, distribution, and quality surveillance of bulk petroleum products.
- Maintaining a portion of theater petroleum reserve.
- Operating a mobile petroleum products laboratory.

PETROLEUM PIPELINE AND TERMINAL OPERATING COMPANY

1-51. The petroleum pipeline and terminal operating company's mission is to operate petroleum pipeline and terminal facilities for receipt, storage, issue, and distribution of bulk petroleum products. It is normally assigned to a petroleum pipeline and terminal operating battalion. Core capabilities include:

- Operates fixed terminal facilities for storage of up to 500,000 barrels of bulk petroleum. Normally consists of two tank farms, each with a capacity of up to 250,000 barrels or operates a tactical petroleum terminal with a storage capability of up to 90,000 barrels.
- Operates up to 75 miles of pipeline for distribution of approximately 720,000 gals. per day.
- Operates six pump stations 24 hours per day to deliver bulk product through 6 or 8 inch multi-product coupled pipeline.
- Operates facilities for shipment of bulk product by coastal tanker, barge, rail, and tank trucks.
- Maintains a prescribed reserve of bulk product for the theater.
- Operates a fuel system supply point (FSSP) for bulk issue operations.
- Provides limited bulk fuel reduction capability.

PETROLEUM SUPPORT COMPANY

1-52. The petroleum support company's mission is to receive, store, issue, and provide limited distribution of bulk petroleum products. The petroleum support company is normally assigned to a petroleum supply battalion or a CSSB. When task organized with three petroleum support platoons core capabilities include:

- Storing up to 1,800,000 gallons of bulk product.
- Receiving and issuing 600,000 gallons daily when configured with three QM petroleum support platoons (50K)
- Distribution of 48,750 gallons bulk fuel daily based on 75% availability of dispensing vehicles at 2 trips per day.

1-53. The petroleum support company may be task organized with additional modular capabilities. A petroleum quality analysis team provides petroleum quality surveillance; and a modular assault hose team provides the capability to establish, maintain, and operate ten miles of 4 inch hose line.

1-54. When required to provide theater stockage, each petroleum support platoon can operated an 800K FSSP in lieu of two 300K FSSPs. The unit does not have organic 800K FSSPs so they must be issued from Army prepositioned stocks (APS) or theater provided equipment.

BASE PETROLEUM LAB (THEATER)

1-55. The base petroleum lab's mission is to perform complete specification and procurement acceptance testing of petroleum products and is assigned to an ESC or TSC. The lab's capabilities include:

- Largest POL mobile lab available for POL quality surveillance. Provides theater level POL testing and evaluation.
- Provides technical support and supervision to other laboratories for handling, storing, sampling, identifying, and performing quality evaluation of petroleum products and their containers for all U.S. and multinational forces.
- Quality surveillance (Modified A, B2-3 and C level) testing using data to make recommendations for proper use, reclamation, and disposal of the product.

QUARTERMASTER ASSAULT HOSE LINE TEAM

1-56. The mission of the hose line team is to maintain and operate 4" hose lines and to establish and maintain linkage between POL tank farms and high volume users. They are normally assigned to a petroleum support company. Capabilities include:

- Establishes, maintains and operates up to 10 miles of 4" hose line.
- Provides movement of approximately 1,680,000 gallons of bulk petroleum per day (20 operational hours and 4 hours maintenance downtime).

QUARTERMASTER PETROLEUM LIAISON TEAM

1-57. The QM POL liaison team provides liaison, coordination, specialized technical expertise for bulk petroleum and/or alternative fuels support between U.S., multinational forces, and host nations. The team operates primarily within the theater; however, it may be required to assist units within an area of operation or outside the theater in support of unified land operations. The team regularly interfaces with bulk petroleum suppliers and other DOD strategic partners (DLA-Energy, DCMA, TRANSCOM, etc.) throughout the region IAW operational needs. The teams capabilities include:

- Providing liaison and coordination for bulk petroleum and alternative fuels support between U.S., Multinational Forces, and Host Nations.
- Communicates available bulk petroleum and alternative fuels data to higher headquarters.
- Determines transportation (intra and/or inter-theater) requirements for movement of bulk POL and/or alternative fuels from non-U.S. activities.
- Insures proper quality surveillance procedures are used to meet U.S. military standards and ISO standards as may be required.

QUARTERMASTER PETROLEUM QUALITY ANALYSIS TEAM

1-58. The petroleum quality analysis team team operates a petroleum laboratory used to perform complete specification and procurement acceptance testing of petroleum products. Petroleum quality analysis teams are normally assigned to POL support companies in the corps/division area and aviation support battalions. Their capabilities are as follows:

- Technical assistance for handling, storing, sampling, identifying, and performing quality evaluation of petroleum products and their containers for all U.S. and multinational forces on an area support basis.
- Provides petroleum quality surveillance testing under field conditions.
- Quality surveillance (B-level) testing on ground and aviation fuels and limited B-level testing on packaged petroleum products using data to make recommendations for proper use, reclamation, and disposal of the product.

THEATER AERIAL DELIVERY COMPANY

1-59. The theater aerial delivery company packs parachutes and temporarily stores and rigs up to 50 short tons of supplies and equipment for airdrop for Army, Air Force, and other services. The company also provides for field level maintenance and supply of airdrop equipment used by supported units. This unit is assigned to a combat sustainment support battalion. It also provides the following capabilities

- Capable of packing 160 personnel parachute systems per day (can support organic personnel; supported units should provide own personnel parachutes).
- Assists in loading supplies and equipment into aircraft and in release of supplies and equipment from aircraft of equipment in flight.
- Supplements the capabilities of other units engaged in parachute packing and airdrop support operations as required.
- Provides supervision, technical assistance, and advice in the recovery and evacuation of airdrop equipment.
- Provides exchange of personnel parachutes used by Army aircraft crews.
- Provides technical assistance to the Army's portion of joint airdrop inspection of loads.
- Provides limited sling load capability,

AERIAL DELIVERY SUPPORT COMPANY

1-60. The aerial delivery support company provides aerial delivery direct support for two to four (2 to 4) airborne BCT or provides area support within the division area. It provides with packing, inspection, and field level maintenance of parachutes; inspects rigging of airdrop and sling-load; provides airdrop

sustainment support of 150 to 300 stons per day. The aerial delivery support normally assigned to a CSSB. Each platoon has the following capabilities:

- One platoon does either direct support to a BCT or for units operating in the division area. It cannot perform both missions concurrently.
- Limited receipt, storage and issue of airdrop items.
- Field level maintenance for organic mission-peculiar airdrop equipment.
- Inspection services and technical assistance for packing, rigging, and loading, supplies and equipment for an airdrop.
- Supervision and technical assistance in the recovery and evacuation of airdrop equipment after an airdrop.
- Inspection and packing of parachutes.
- Sustainment airdrop support to the BCT of up to 67 short tons per day (containerized delivery system to type V heavy drop platforms).
- Sustainment support for 356 personnel parachutes per day/high altitude low opening 13 parachutes/cargo and small extraction parachute pack.

RIGGER SUPPORT TEAM

1-61. The QM rigger support team is a ten-Soldier team that provides personnel parachute packing for static line and military free fall operations for long range surveillance units in a battlefield surveillance brigade. They are typically assigned to a CSSB or attached to the battlefield surveillance brigade support company. The rigger support team's capabilities include:

- Capable of packing personnel parachute systems, to include high altitude low opening and/or cargo parachutes and rigging field level maintenance on air items.
- Performs limited sling load missions.
- Assists in loading supplies and equipment into aircraft and in release of supplies and equipment from aircraft of equipment in flight.
- Provides supervision, technical assistance, and advice in the recovery and evacuation of airdrop equipment.

QUARTERMASTER WATER SUPPORT COMPANY

1-62. The QM water support company headquarters provides mission command, administrative, logistics, operational and field feeding support, and field level maintenance to the QM water support company. The company is normally assigned to a CSSB, and has three water support platoons each providing the following capabilities:

- Produces 150,000 gallons of potable water using a fresh water source per day or 100,000 gals daily from a salt water source.
- Water storage for 100,000 gallons of water.
- Limited local distribution capability of 30,000 gallons using 2,000 gal tanktrucks with HEMTT-load handling system and palletized loading system trailers (based on 2 trips per day)
- The petroleum support company may be task organized with additional modular capabilities. A tactical water distribution system (TWDS) Team provides the capability to establish, maintain, and operate ten miles of hose line which may be used to distribute water from the purification site to a storage site, connect two storage sites or distribute water to a high volume user.
- When required to provide extra storage in hot/arid environments, each water support platoon can operated a 300K or 800K potable water storage/distribution system (PWS/DS). The unit does not have organic 300K or 800K potable water storage/distribution system so they must be issued from APS or theater provided equipment. However, personnel from the production section must be diverted to operate the large potable water storage/distribution system so the units that receive the 300K or 800K potable water storage/distribution system will not perform water purification. Other platoons will purify the water to be stored in the 300K or 800K potable water storage/distribution system.

FORCE PROVIDER COMPANY

1-63. The force provider company headquarters provides mission command, training, administration, and logistics support for the operation of one to six force provider platoons. It is designed to complement theater reception bases, intermediate staging bases (ISB), rest and refit, redeployment and base camps for stability operations such as humanitarian aid and disaster relief, peace keeping/enforcement, or other designated locations in support of an operation.

1-64. The force provider company (as a structured company) will be employed in direct support of a brigade size element or base camp supporting up to 3600 personnel. The force provider company (as an unstructured company) can be employed in direct support of a company size element (approximately 150), incrementing up to a brigade size element. It may also be employed to provide support for RSOI, redeployment, or stability operations

1-65. The force provider company consists of seven platoons; a company headquarters platoon, a service and support platoon, two heavy force provider platoons, and four light force provider platoons. The service and support platoon's capabilities include providing field level maintenance for the force provider platoons and to provide materiel handling equipment and construction/emplacement capability for the force provider platoons.

1-66. There are two heavy platoons and four light platoons within the company. Each heavy platoon provides one force provider module with full service support for 550 Soldiers, with climate controlled billeting, food service support, shower and latrine facilities, laundry service, and morale, welfare and recreation facilities. The heavy platoons also provide field feeding support for the company headquarters and light platoons (when they are not housing customer units). Each light platoon provides the following:

- Expeditionary force provider modules supporting 550 Soldiers in one location, or split to support up to four locations with 150 person modules, with climate controlled billeting, food service support, shower and latrine facilities, laundry service, and morale, welfare and recreation facilities.
- Long-term support in remote locations. The customer unit provides support capabilities, such as cooks for field feeding.

1-67. Force provider modules are not currently organic to the force provider company and until requisitioned, are maintained as part of the United States Army Materiel Command (USAMC) owned Army pre-positioned stocks (see FM 4-20.07, Quartermaster Force Provider Company, for more information on Force Provider operations).

1-68. The force provider company is normally assigned to the TSC and further attached to a CSSB. Under certain force provider companies or platoons and force provider modules may be assigned to a JTF, or for very limited operations a BSB. See FM 4-20.07 for more detail on force provider doctrine.

QUARTERMASTER FIELD SERVICES COMPANY

1-69. The quartermaster field services company's mission is to provide shower, laundry, and clothing repair on an area basis. It is assigned to a CSSB within a sustainment brigade. Each company has six shower, laundry, and clothing repair teams which can support 500 Soldiers per day/3,500 per week, for a total of 21,000 Soldiers per week. Core capabilities include:

- Providing laundry services totaling 315,000 lbs of laundry per week based on 15 lbs per soldier per week.
- Providing shower capability.
- Providing limited light textile repair.
- Providing delousing service when deemed necessary by medical authority.

1-70. Shower, laundry, and clothing repair teams from the field services company can be moved forward to the brigade area to provide field services for the BCT during stability operations.

QUARTERMASTER MORTUARY AFFAIRS COMPANY

1-71. The mortuary affairs company's mission is to provide the full range of mortuary affairs (MA) support. It can perform any one of the following tasks at a time: mortuary affairs collection point (MACP) operations, MA contaminated remains mitigation site operations, theater mortuary evacuation point (TMEP), or theater personal effects depot. The platoons within the company cannot perform these tasks concurrently. The QM MA company is normally assigned to a CSSB but can operate independently.

1-72. The company has five MA platoons that provide the following capabilities:

- Conduct limited search and evacuation operations of deceased U.S. military, certain U.S. civilians and allied personnel.
- Receive, inventory, and coordinate evacuation of personal effects with remains; maintain essential records and reports.
- Provide forward collection teams which can process 80 remains and personal effects per day from up to four locations. This includes evacuation of remains to a main collection point.
- Function as a main collection point to process up to 400 remains per day for onward movement to the TMEP.
- Operate a TMEP which can process and evacuate 250 remains per day.
- Operate an in-theater mortuary when augmented with a second platoon and civilian personnel.
- Operate a personal effects (PE) depot to receive, store, safeguard, inventory, process, and ensure proper disposition of personnel effects for approximately 500 remains.
- Establish and operate a mortuary affairs contaminated remains site when supported by a chemical decontamination company and other designated augmentees.

QUARTERMASTER SUPPLY COMPANY

1-73. The QM supply company headquarters provides mission command, administrative, logistical, and operational and field feeding support, and field level maintenance to the QM supply company, a subsistence support platoon, and three supply platoons that operate supply support activities (SSA). The QM supply company is normally assigned to a CSSB but can operate independently.

1-74. The subsistence platoon provides perishable and semi-perishable subsistence support to approximately 12,000 Soldiers and provides the following capabilities:

- Receives, stores and issues approx. 40.1 short ton of Class I per day.
- Provides refrigeration for perishable rations.
- Conducts break bulk and builds unit configured loads.

1-75. The supply platoons provide supply support of classes II, III(P), IV, VII, IX, packaged water and paper maps to supported organizations. They provide general support to Brigade Combat Teams and on order provide support to centralized receiving and shipping points (CRSPs) and theater distribution centers (TDCs). Their capabilities include the:

- Receive, storage, issue, and accounting for 36.14 STONs of Class II, III (packaged), IV, IX supplies and 79.17 STs of packaged water.
- Receive storage, issue, and accounting for maps.
- Provides for stock accounting operations

QUARTERMASTER COMPOSITE SUPPLY COMPANY

1-76. The QM composite supply company provides general supply, class I perishable and semi-perishable supply, retrograde support, non-mobile petroleum storage, water purification support, and class V support. It is normally attached to CSSBs providing general support water purification and non-mobile petroleum storage for BCTs conducting division operations. The QM composite supply company may also be attached to CSSBs designated to provide the same types of support to multi-functional and functional support brigades performing corps missions in support of joint/multinational forces. In this instance if the supported brigade is a fires brigade, the composite supply company may be task organized with an ammunition transfer and holding point for munitions support.

1-77. The composite supply company headquarters provides mission command, administrative, and logistics support to assigned or attached platoons or modules.

1-78. The composite supply company has two supply platoons that provide classes II, III (packaged), IV, VII, IX, maps, and bottled water support to organizations at any level down to and including the BCT. This company may also provide support to centralized receiving and shipping points and theater distribution centers and designated in an operations order.

1-79. The composite supply company has one petroleum and water platoon that provide bulk fuel and purify, store and distribute potable water for BCTs conducting division operations.

1-80. If the composite supply company is supporting a fires brigade it may have an ammunition transfer and holding point team that receives, stores, issues, ships, inspects, and performs field level munitions maintenance support. The team validates and processes unit requests, and provides technical assistance for unit issue and turn-in. It also maintains status of open unit documents and temporarily holds ammunition pending unit receipt.

SECTION IV – AUTOMATED INFORMATION SYSTEMS

1-81. Commanders employ a detailed mission command depending on the complexity of the action or task to be performed and other METT-TC considerations. Mission command provides subordinates with the greatest degree of flexibility to exploit opportunities and respond to threats by exercising disciplined initiative within their commander's intent to accomplish the mission. Conversely, detailed command centralizes information and decision-making authority. Plans and orders are detailed and explicit, and successful execution depends on strict obedience by subordinates, with minimal decision-making and initiative on their part. Because of these disadvantages, mission command is preferred in almost all cases. See FM 6-0 for more information on detailed and mission command.

1-82. Essential to the seamless flow of supplies and materiel throughout the theater is the parallel and collaborative planning that occurs between the supporting and supported organizations. Parallel and collaborative planning promotes situational understanding, enables unity of effort, and is essential for the successful execution of mission command.

MISSION COMMAND SYSTEM

1-83. Commanders execute centralized command through systems that enable effective synchronization of the actions of subordinates with those of supported forces to achieve unity of effort and unity of purpose. A system such as this is comprised of personnel, procedures, information management, and equipment and facilities that are essential to planning, preparing for, executing, and assessing support operations.

PERSONNEL

1-84. The most important element of mission command systems are people—Soldiers who assist the commander and exercise control on their behalf. Personnel comprising the mission command systems include the staff and deputy commander/executive officer. The staff provides relevant information and analysis, makes running estimates and recommendations, prepares plans and orders, and monitors execution. Other command systems exist to serve the personnel and the commander.

1-85. The staff operates the commander's mission command systems and carries out the commanders' intent by establishing and maintaining a high degree of coordination and cooperation with staffs of higher, lower, supporting, supported, and adjacent units. This relationship is based on mutual respect, developed through a conscientious, determined, and helpful approach focused on solving problems. Anything less undermines the confidence and trust required for mission command at all levels.

PROCEDURES

1-86. Staff officers develop standardized procedures to govern actions within the mission command system in order to prioritize, direct, redirect, integrate, and coordinate logistic functions effectively and efficiently.

The use of standardized procedures and reporting processes reduces decision action cycle time; and enables the efficient use of constrained resources in support of rapidly changing operational requirements.

INFORMATION MANAGEMENT

1-87. Information management is the process of providing relevant information to the right person at the right time in a usable form to facilitate situational understanding and decision making. It uses procedures and information systems to collect, process, store, display, and disseminate information. It consists of relevant information and information systems. The computers (hardware and software) and communications directly involved in mission command constitute the information system.

EQUIPMENT AND FACILITIES

1-88. The equipment and facilities element of the commander's mission command information system provides sustainment and a work environment for the other elements of a command system. Equipment and facilities include all command-support equipment other than information systems. They must meet Soldiers' physiological needs—shelter, rest, sanitation, food, and water.

MISSION COMMAND COMMUNICATION SYSTEMS

1-89. Army mission command systems are comprised of the following subsystems: Advanced Field Artillery Tactical Data System, Air and Missile Defense Planning and Control System, Battle Command Sustainment Support System, Combat Terrain Information System, Distributed Common Ground System – Army, Command Post of the Future, Force XXI Battle Command Brigade and Below System, Joint Network Node, Maneuver Control System, and the Tactical Airspace Integration System.

1-90. Of the systems identified above, quartermaster Soldiers rely upon the Battle Command Sustainment Support System (BCS3), Command Post of the Future (CPOF), Distributed Common Ground System–Army, and Force XXI Battle Command, Brigade-and-Below to synchronize and integrate operations throughout their specified area of operations.

1-91. Force XXI Battle Command Brigade and Below and BCS3 provide commanders and staffs with a common operational picture (COP) of their operational environment. The means to visualize a common operational picture come from BCS3, ITV data, logistics status reports, and various logistics information systems .

BATTLE COMMAND SUSTAINMENT SUPPORT SYSTEM

1-92. BCS3 is the Army's logistics mission command information system. BCS3 provides battle command services including commodity tracking, convoy operations and tracking, and management of RSOI operations.

1-93. BCS3 aligns sustainment, in-transit, and force data to provide actionable information that aids commanders in making critical decisions. BCS3 also gives logisticians and other personnel access to the latest available information on a map-centric view with logistics common data, ITV alert features, and input to combat power computations. The system's software is capable of running on classified or unclassified networks.

1-94. BCS3 enables commanders and logisticians to plan, rehearse, integrate, and sustain missions utilizing the same system. The system provides sustainment and movement information for command decisions by displaying current status and the tools to determine future projections of fuel, ammunition, critical weapons systems, and personnel. It integrates actionable data from numerous available ABCS and LIS to support operations.

1-95. BCS3 has four main functional features which, together with medical and movement information, provide a sustainment COP:

- Deployment/redeployment/reception, staging, onward movement tracking.
- Logistics reporting.

- Convoy tracking.
- Commodity management.

COMMAND POST OF THE FUTURE

1-96. CPOF is a software capability hosted on a computer system that currently provides collaboration and visualization for Army division and brigade commanders and staff. The CPOF software provides a collaborative operating environment, voice over internet protocol, a highly intuitive, graphical user interface and enhanced briefing capabilities. CPOF allows commanders from battalion level and higher to feed real-time situational awareness into the system and have that information available in text and graphic representation immediately by fellow commanders and staffs at all levels.

DISTRIBUTED COMMON GROUND SYSTEM – ARMY

1-97. DCGS-A is a single integrated intelligence ground processing system that serves as the primary Army system for tasking, processing, correlating, exploiting, and disseminating ISR assets and information. DCGS-A provides operational commanders with access to data, information, and intelligence collected by national, joint, other Services, multinational, and Army intelligence as well as non-intelligence sensors and systems.

1-98. DCGS-A facilitates the development of situational understanding by allowing operational commanders to visualize, analyze, and understand the threat and other conditions of their operational environment, predict threat intentions, execute targeting, conduct ISR integration, and support information operations.

FORCE XXI BATTLE COMMAND, BRIGADE-AND-BELOW

1-99. Force XXI Battle Command Brigade and Below is the principal digital command system for Army forces at brigade level and below. The system is an automated, network enabled system which provides brigade and below elements with a seamless battle command capability from brigade to Soldier/platform level. Functional capabilities include:

- Real-time situational awareness.
- Shared COP of the specific operational environment.
- Graphical displays, with friendly and enemy unit locations.
- Communications/electronics interfaces with host platforms.

LOGISTICS INFORMATION SYSTEMS

1-100. The logistics information systems (LIS) are a separate set of systems that provide commanders and logisticians with support-related information necessary to conduct support operations. This includes materiel management and financial information for various classes of supply and functions.

GLOBAL COMBAT SUPPORT SYSTEM-ARMY (GCSS-ARMY)

1-101. GCSS-Army is the comprehensive logistics automation enabler for the Army. It provides a single system with a single data base for anticipating, allocating and synchronizing the flow of supplies in support of combatant commanders. It integrates enterprise information and provides all echelons access to critical logistics information used to support distribution and materiel management.

1-102. GCSS-Army replaces a variety of current logistics information systems, and automated capabilities such as the Standard Army Retail Supply System (SARSS), the Standard Army Maintenance System (SAMS), and the Property Book Unit Supply Enhanced (PBUSE). It also replaces the Fleet Management System (FLMS) used by the U. S. Army Reserve Command (USARC) to support equipment storage and maintenance for Reserve units. The Army Enterprise System Integration Program (AESIP) will link GCSS-Army—the Army’s field-level logistics information system—with Logistics Modernization Program (LMP)—the Army’s national-level logistics system. GCSS-Army, AESIP and LMP will provide a single

access point to the Single Army Logistics Enterprise (SALE) for external customers, such as the U.S. Transportation Command, the Defense Logistics Agency, and original equipment manufacturers.

1-103. GCSS-Army also interfaces with other information technology initiatives, including military and commercial communications infrastructure, to meet Warfighter Requirements and Operating Force/Generating Force/Sustaining Base Logisticians' Requirements. It will provide the capability to anticipate Warfighter requirements and to provide asset visibility and control along with timely and accurate management information. GCSS-Army will be capable of supporting Army Force Generation (ARFORGEN) processes, rapid force projection, and informing system life-cycle management decisions. GCSS-Army will also meet tactical financial requirements by providing an audit trail from financial transaction to originating logistics event and substantive evidence of general ledger account balances for financial audit purposes.

PROPERTY BOOK UNIT SUPPLY ENHANCED

1-104. Property Book Unit Supply-Enhanced (PBUSE) is an automated property accountability system that provides online management information and automated reporting procedures for the property book officer (PBO). It is designed to assist commanders at all echelons in identifying, acquiring, accounting, controlling, storing, and properly disposing of materiel authorized to conduct the unit mission.

1-105. PBUSE processes sensitive but unclassified information in the system's high-level mode, which uses permission control to manage who has access to what data. The system is accessed through user identifications and passwords; operates over the non-secure internet protocol router network and internet connections.

1-106. PBUSE provides users the ability to process transactions for supply classes I, II, limited III (P), IV, VII, and limited IX. It interfaces with the standard Army retail supply system (SARSS) to requisition property book and other accountable items required by units.

1-107. PBUSE processes include formal property accountability (to include sub-hand receipts and component listings); requests for supplies, including an interactive catalog; document register maintenance; unit load management; financial capabilities; and asset reporting.

1-108. PBUSE uses the combat service support automated information system interface (CAISI) to interface with SSAs, SARSS, two levels of standard Army maintenance system – enhanced (SAMS-E), and the federal logistics record. PBUSE also provides property book related data to the LIW.

STANDARD ARMY AMMUNITION SYSTEM-MODERNIZATION

1-109. The Standard Army Ammunition System-Modernization is an automated logistics information system designed to provide centralized information management to support ammunition management functions.

1-110. Standard Army Ammunition System – Modernization automates the receiving, storing, and issuing processes at ammunition supply activities located throughout the theater (theater storage areas, ammunition supply points, and ammunition transfer holding points). It also enables in-transit visibility (ITV) by incorporating the latest automated information technology to read and write radio frequency identification tags. Radio frequency identification tags provide the means for the ITV system to report munitions movements throughout the intratheater distribution system.

1-111. Standard Army Ammunition System – Modernization provides the distribution management centers with the capability to:

- Maintain the current status of all ammunition storage sites.
- Requisition from the national inventory control point (NICP).
- Support ad hoc query, including data imported and exported to other systems.
- Maintain and calculate the status of controlled supply rate.
- Recommend redistribution of assets.
- Support quality assurance and stockpile management.

- Forecast future requirements.

1-112. Standard Army Ammunition System – Modernization interfaces with the following automation systems: commodity command standard system, worldwide ammunition reporting system, and total ammunition management information system.

STANDARD ARMY MAINTENANCE SYSTEM – ENHANCED

1-113. The Standard Army Maintenance System–Enhanced (SAMS-E) merges Unit Level Logistics System–Ground, Standard Army Maintenance System-1 (SAMS-1), and Standard Army Maintenance System-2 (SAMS-2).

1-114. SAMS-E modernizes the following functions:

- Automated unit level maintenance, supply, and readiness reporting.
- Day-to-day weapon system and sub-component readiness status.
- Maintenance and related repair parts information.

1-115. SAMS-E supports critical functions such as equipment operator qualifications, equipment dispatching, tracking equipment preventive maintenance checks and services, equipment fault records, and Army oil analysis program reporting.

1-116. SAMS-E can process sensitive, but unclassified, data protected to ensure data availability and integrity. It has a fully documented system security authorization agreement that provided a net worthiness certification.

1-117. SAMS-E includes the following additional enhancements:

- Utilizes both the federal logistics record and the SARSS catalog update.
- Establishes the document register as the only supply register.
- Identifies units as either direct or indirect (supported customer).
- Automatically generates work orders if equipment is dead lined or faults are created and parts are received.
- Changes management of unit data from Department of Defense Activity Address Code (DODAAC) to unit identification code based selection & entry.
- Retains the man-hour accounting on/off switch as an option in the event of deployment.
- Introduces the stay behind equipment transfer.

STANDARD ARMY RETAIL SUPPLY SYSTEM

1-118. SARSS is a multi-echelon supply management and stock control system; providing stock control and supply management to the Army retail level. SARSS also provides supply-related data to the LIW.

1-119. SARSS supports the accountability, requisition, storage, issue, and management of supply Classes II, III (P), IV, VII, and IX. SARSS supports split-based operations that provide supply management functions to all elements within a sustainment domain. Within the modular force, SARSS is comprised of three subsystems: SARSS-1, SARSS-2AC/B, and SARSS gateway.

1-120. SARSS-1 operates at the BSB and CSSB levels. SARSS-1 maintains accountable records and performs supply functions such as receipt, storage, and issue of supplies. It is a real-time, transaction oriented system where users can interactively enter, retrieve, and update supply information. Major functions executed in SARSS-1 include processing of customer requests for issue, cancellation, or modification; replenishment; excess identification; inventory; and location survey. SARSS-1 interfaces with PBUSE, and SAMS-E.

1-121. SARSS-2AC/B (commonly referred to as the corps/theater automatic data processing service center [CTASC]) supports materiel management functions performed by the TSC or ESC. SARSS-2AC/B also maintains a custodial availability balance file that is updated by SARSS-1. This function provides the TSC or ESC with visibility of assets in all SARSS-1 activities throughout the theater. SARSS-2AC/B processes include management support, financial adjustment, DODAAC parameter maintenance, general

system administration, and supports Army war reserves, materiel rebuild programs, and major item acquisitions. SARSS-2AC/B capabilities also include non time-sensitive functions such as catalog, document history, and demand history.

1-122. SARSS-Gateway provides the capability, through improved communications and advanced automation techniques, to place orders on the source of supply the same day they are produced by the customer, and to provide asset visibility of all assets that are available within a specified geographical area. The requests/requisitions are electronically transmitted from customers to the Gateway computer where lateral search/issue decisions are made based on resident asset balance file uploaded by the LIS and maintained at the Gateway. If insufficient assets are available, the Gateway determines whether to send replenishment or dedicated requisitions to the wholesale source of supply and provides status to customers on the action taken.

UNIT LEVEL LOGISTICS SYSTEM – AVIATION (ENHANCED)

1-123. The unit level logistics system – aviation (enhanced) is a multi-user system incorporating a local area network to link the system of record functions of supply, production control and quality control, phase team, man-hour tracking, and back shop sections within aviation field maintenance organizations. This aviation readiness enhancing system is operated by unit crew chiefs and field level aviation maintenance personnel.

1-124. The system allows users to track and monitor scheduled and unscheduled Preventive Maintenance Checks and Services, work-orders, on-hand maintenance stockage usage, transactions for issue, receipt and turn-in, and The Army Maintenance Management System-Aviation functional requirements. It automates both supply chain management and maintenance functions prescribed by the Army Maintenance Management System-Aviation, DA Pamphlet (DA PAM) 738-751. The system includes the capability to send Secured File Transfer Protocol, uses automated identification technology (AIT) to associate unique item identification (UII) to property assets using AIT scanner functionality and implements improvements to the Aviation Maintenance Automated Tracking System.

1-125. The Interim Change Package 6.0.14 has been fielded Army-wide to the unit level logistics system – aviation (enhanced) Logbook Computer as a Total Force solution used by the Active and Reserve components. The GCSS-Army plans to integrate unit level logistics system – aviation (enhanced) functionality and incorporate Common Information Management Service (CIMS) during its fielding processes.

BATTLE COMMAND COMMON SERVICES

1-126. Battle Command Common Services (BCCS) is a suite of servers that forms the hub for the network of ABCS systems. It provides the tactical battle command and enterprise servers, services, and large-volume data storage for commanders and staffs at battalion through ASCC levels, attached to the tactical local-area network via ethernet and joint network node topologies. Interoperability between and among the various ABCS systems is facilitated through the use of publish and subscribe services/ publish and subscribe services shell/data dissemination services) and the tactical services gateway. Essential enterprise services include email, asynchronous collaboration and file storage, and database management. Data residing on the tactical local-area network is stored in a separate, attached storage device that is part of the prescribed server suite.

COMBAT SERVICE SUPPORT AUTOMATED INFORMATION SYSTEMS INTERFACE

1-127. CAISI is commercial off-the-shelf technology, integrated for Army use, which provides logisticians with a dedicated logistics communications capability. It enables any commercial off-the-shelf system to securely network within brigade support areas and supply support activities, and to electronically exchange information via tactical or commercial communications with higher headquarters.

1-128. The latest configuration of CAISI incorporates an improved commercial off-the-shelf wireless technology enabling CAISI to communicate in tactical environments over much longer lines of communication. CAISI provides commanders, managers, and logisticians an interface device that supports

sustainment operations ranging from the BCT and brigade support areas to theater and operational-level sustainment facilities within a theater. It is capable of concentrating users in a network environment and transferring accurate and timely data.

1-129. Data, voice, and media transmissions are extended beyond line-of-sight when CAISI is connected to sustainment satellite communications usually provided by Combat Service Support Very Small Aperture Terminal (CSS VSAT). CSS VSAT connectivity provides wide-area network users with access to the non-secure internet protocol router network, Army/Defense Knowledge Online, and limited voice-over-internet protocol digital communications.

COMBAT SERVICE SUPPORT VERY SMALL APERTURE TERMINAL

1-130. CSS VSAT is a software-driven terrestrial based station used for the reliable transmission of unclassified logistics data, video and/or voice via satellite. Routinely used in conjunction with CAISI, it permits the transmission of data via the non-secure internet protocol router network from anywhere in the world to anyplace in the world with appropriate reception capability. Together with the CAISI, the CSS VSAT has given logisticians the visibility they need to manage and have visibility across the theater.

1-131. CSS VSAT is a commercial satellite based, wide area, data network that supports logistics information systems for deployed units. It requires no specialized staff or additional technology to operate.

1-132. CSS VSAT communications provide error-free digital data transport services and high network reliability. CSS VSAT services are delivered through the use of Ku-band geostationary satellites for video, voice, fax, and data transmissions. CSS VSAT uses a star network with the use of satellite earth stations that rely on a large central hub. They can be configured in both one-way (receive only) and two-way (send - receive) CSS VSAT configurations.

LOGISTICS INFORMATION WAREHOUSE

1-133. LIW consists of data management and business intelligence capabilities resulting from the merger of national and tactical logistics information. By integrating the logistics integrated data base with the integrated logistics analysis program under one organization, the Army's national and tactical data sources are harmonized to provide:

- One authoritative source of logistics information.
- One accurate view of the Army's materiel posture.
- Further reductions in unique and duplicative data sources.

1-134. LIW provides a re-engineered single sign-on web access to the existing capabilities of logistics integrated data base, integrated logistics analysis program, and a host of logistics support activity/Army logistics tools. A query and reports capability provides commanders and managers a search capability for data maintained in the LIW. Data mining is accomplished by using search criteria such as national item identification number, line item number, DODAAC, unit identification code, or serial/registration number.

1-135. A valid LIW account is required to access LIW databases. If you do not have an account, one can be requested by completing a system access request. The system access request may be found at: <https://www.logsa.army.mil>.

1-136. LIW provides materiel managers, other logisticians, and commanders with an authoritative source for decision support and analysis. For example, materiel managers use LIW and other logistics support activity databases as their primary source of maintenance and readiness management data.

SECTION V – MATERIEL MANAGEMENT FUNCTIONS

1-138. Modularity brought changes to where and how materiel management is performed, especially at echelons above brigade. Materiel management is now embedded within a more capable, efficient and streamlined support structure. Materiel management functions formerly conducted in the theater by corps and division support command materiel management centers are now executed by a streamlined group of logistics organizations. These include the TSC, the ESC, sustainment brigade, CSSB and medical logistics management center.

1-139. This improved materiel management capability provides the ASCC with a centralized materiel management capability that provides increased efficiencies and effectiveness by reducing redundant materiel management layers, centralizing materiel management functions, and employing a theater-wide view of resources. The result of which is responsive support to ARFOR requirements and reduced customer wait time.

1-140. Quartermaster units are instrumental in providing statuses commodities of managed. SARSS is the primary LIS used for materiel management purposes; supporting materiel management functions for supply classes II, IIIP, IV, VII, and IX.

1-141. Commodities not supported by a LIS are Class I and Class III (B). Materiel managers use unit strength figures as the basis for determining Class I requirements. Class III (B) requirements are based on customer generated logistics reports.

1-142. Materiel management responsibilities quartermaster Soldiers typically perform include managing, cataloging, requirements determination, requirements validation and prioritization for procurement, distribution, redistribution of excess, and retrograde of materiel.

1-143. Materiel management functions are the warehousing, managing, cataloging, requirements determination, requirements validation, and prioritization for procurement, distribution, redistribution of excess, and retrograde of materiel.

1-144. Warehousing is a means to organize, sort, and safeguard materiel. The function of warehousing is the process of warehouse management, receiving, storing, issuing, securing, inventory management, and accounting for materiel. Warehousing does not imply the use of fixed facilities and can be performed in tents, containers, or an open area.

1-145. Managing is maintaining accountability and visibility of materiel stored in warehouses or in the distribution system. It is conducted to ensure supply requirements are satisfied and may include cross leveling materiel to fill shortages and ensure materiel is available to meet operational needs. Managers use this function to monitor and control materiel in theater.

1-146. Cataloging is necessary to maintain proper location and identification of materiel. Managers need correct identification and location of materiel stored in warehouses to meet requirements. Unidentified, improperly cataloged items result in excess items being ordered by materiel managers.

1-147. Requirements determination is a clear understanding of the actual supply requirements to meet operational needs. Actual requirements determination aids materiel managers in defining capabilities to support anticipated workloads. Materiel and distribution managers must have visibility of all requirements to ensure the distribution system effectiveness. Requirements are determined by identifying all resources based on requirements communicated by operational forces, stocks on hand, materiel release orders, and transportation request.

1-148. Requirements validation and prioritization are used to ensure the materiel managers are synchronized with the commander's priorities. Validation and prioritization is the function of certifying movement and supply requirements against commander's priorities. Managers will satisfy the commander's requirements and priorities through appropriate sourcing, maintenance, and/or distribution of materiel and equipment.

1-149. Distribution is the operational process of synchronizing all transportation elements of the logistical system to deliver the right materiel to the right place and the right time to support the commander. Distribution is also used to determine customer response in the terms of time, quality, cost, and variability.

1-150. Redistribution reallocates excess materiel to other locations in theater using all transportation assets available. Managers may use excess materiel in theater to fill shortages and meet operational requirements.

1-151. Retrograde is the return of materiel from the owning/using unit back through the distribution system to the source of supply, directed ship to location and/or point of disposal. Material managers may use the retrograde process to redirect sustainment to different locations to fill shortages and meet operational requirements using all transportation assets available military or civilian (mission dictating).

READINESS MANAGEMENT

1-152. Readiness can be viewed from two perspectives: unit readiness and joint readiness. The first is concerned with a unit's ability to perform the mission for which it was designed. The second is concerned with a combatant commander's ability to integrate and synchronize combat and support forces to conduct assigned missions.

1-153. From an operations perspective, tactical-level logistic functions (manning, arming, fueling, fixing, moving, and sustaining Soldiers and their systems) provide a focus to maintaining unit readiness. An increased logistic capability at the BCT-level provides each brigade with improved capabilities to manage readiness and effectively self-sustain operations – the result of which is improved operational endurance.

1-154. At corps and division levels, the monitoring and tracking of readiness postures remains an operational imperative. Collaboration and coordination with the TSC or ESC and supporting sustainment brigade determines and establishes the logistic priorities necessary to achieve and sustain required readiness postures.

1-155. Maintaining required readiness levels sustains a combat ready Army force. A combat ready Army force enables integration and synchronization of complementary capabilities on a joint level; enabling combatant commander freedom of action.

OPERATIONAL ENERGY MANAGEMENT

1-156. Planning for the effective use of operational energy is an essential consideration. Operational energy means the energy required for training, moving, and sustaining military forces and weapons platforms for military operations. The term includes energy used by tactical power systems and generators and weapons systems. Energy informed decisions provide the greatest net operational benefits and increase mission success through extended range and endurance, flexibility and resilience, enhanced mobility and freedom of action. Commanders at all levels must reinforce behaviors and employ technical solutions that make effective use of energy. Energy considerations should be included during mission planning and resourcing, and then monitored during mission execution. These practices enhance combat effectiveness and reduce risk to Soldiers and units.

SECTION VI – SUPPORT RELATIONSHIPS

1-157. Inherent in support relationships is a clear understanding of the roles of each commander. The establishing commander, typically the GCC, will define the support relationships, the degree of authority the supported commander has, and the overall priorities. Support relationships employed are direct and general support.

1-158. In general, the supported commander identifies his support requirements in terms of priority, location, timing, and duration. The supporting commander determines the forces, methods, and procedures to be employed in providing the support.

1-159. Supporting and supported commanders must develop a collaborative environment. A collaborative environment is one in which participants share data, information, knowledge, perceptions, and ideas. Collaboration provides planners with a view of the whole plan while working on various portions of a plan, which facilitates achieving unity of effort as well as unity of purpose.

1-160. A TSC is typically the senior Army logistics headquarters in a theater. The parent organization of the TSC is the ASCC. The typical relationship between TSC organizations and supported forces is general support. However, under certain METT-TC conditions, a command relationship such as tactical control or operational control may be appropriate.

SUPPORT RELATIONSHIPS AT ECHELONS ABOVE BRIGADE

1-161. The TSC, ESC, sustainment brigade, and CSSB are normally in a general support relationship to Army units operating at echelons above brigade. This support relationship is designated in the current

operations order issued by the ASCC or senior Army headquarters. These support organizations also provide support on an area basis for transient units not identified in the operations order.

SUPPORT RELATIONSHIPS AT BRIGADE LEVEL

1-162. BCTs have organic BSBs that have an inherent, by nature of its assignment, direct support relationship to the BCT. The BSBs have organic forward support companies that provide direct support to the maneuver battalions assigned to the BCT and provide area support within the limits of their capability to non-BCT elements operating in or passing through the area. Under certain circumstances and for limited duration only, the FSCs may be given a command relationship to the maneuver battalion.

SECTION VII – REQUIREMENT FOR TOTAL ASSET VISIBILITY

1-163. The capability to track and shift - and potentially reconfigure - forces, equipment, sustainment, and support, even while en route, provides the means to avoid distribution nodes and segments of the intra-theater distribution system that are congested, threatened, damaged, or under attack. Achieving total asset visibility (TAV) provides much more assurance that supported commanders will receive the right support, at the right place, at the right time, and in the right quantities, across the full spectrum of conflict.

1-164. TAV also provides logisticians and operators with a shared understanding of an integrated picture that offers reliable asset visibility and access to logistics resources. For example, TAV obtains data on all classes of supplies from various LIS and other source systems; providing visibility of materiel in use, in storage, in process, or in-transit. TAV enables logisticians and operators to provide near-real time information to commanders, allowing them to make informed decisions using the most current logistics information. Materiel managers use TAV to identify, cross level, ship, or redirect assets throughout the theater. Sub-elements of TAV are asset visibility and ITV.

ASSET VISIBILITY

1-165. Asset visibility may be defined as having visibility of anything the Army owns, uses, stocks, or stores. It provides logisticians with timely and accurate information on the location, movement, status and identity of units, personnel, equipment, and supplies flowing into, throughout, and out of the theater, enabling them to act upon that information to improve the overall performance of the intra-theater distribution system.

1-166. Within the theater, asset visibility is achieved by linking AIT, such as radio frequency identification tags, memory buttons, smart cards, and barcode readers with automated information system and ground and satellite transmission stations; providing the means to influence the flow of materiel throughout the intra-theater distribution system. Quartermaster units operating SSAs and petroleum storage sites are instrumental in providing stock status to support asset visibility.

IN-TRANSIT VISIBILITY

1-167. ITV is a capability that uses radio frequency (RF) or AIT designed to provide the logistician and customer with visibility and near real-time status on the movement of all classes of supply. It identifies, locates, and tracks the movement of all classes of supply from source of supply to user to include the flow of assets from the consignor to the consignee, port, servicing airhead, supply support activity, or other destination. This includes force tracking and visibility of convoys, containers and pallets, transportation assets, other cargo, and distribution resources within the activities of a distribution node.

1-168. At the theater level, a suite of fully integrated AIT and automated information system capabilities provide logisticians with the means to achieve the ITV required for the seamless flow of supplies, personnel, equipment, and units throughout the intra-theater distribution system. ITV involves three areas: in-container/on-pallet visibility, en route visibility, and transition node visibility.

IN-CONTAINER/ON PALLET VISIBILITY

1-169. In-container/on-pallet visibility consists of detailed content information. It is the source data first established at the depot, vendor, or other source. Distribution managers maintain visibility down to national stock number, transportation control number, and requisition number level of detail, even when containers or pallets are reconfigured to different conveyances. AIT enhances the pipeline capability and affords the opportunity to update the database that provides visibility of the reconfigured shipments efficiently. This level of detail allows systems such as the Defense Logistic Agency's (DLA) asset visibility system to provide a line-item level of detailed responses to queries.

EN ROUTE VISIBILITY

1-170. En route visibility is the detailed visibility of movement platforms and transportation assets while they are mobile and underway. Containers equipped with radio frequency tags and transportation assets equipped with a movement tracking system capability or similar AIT devices provide near-real-time visibility of movements throughout the distribution system as they pass interrogators along the physical network, or transmit position reports via satellite. Specific shipment and movement information is combined to provide of the container and its contents. This enhances a distribution management center's ability to redirect or retask distribution assets to respond to the changing dynamics of the distribution system.

TRANSITION NODE VISIBILITY

1-171. The physical network and the logistics resource capabilities in the theater determine the number and types of transition nodes. Regardless of the number or types of transition nodes, distribution managers and operators must correctly maintain cargo identity and its relationship to the transportation asset that is transporting the cargo. In order to establish and maintain transition node visibility, a network of interrogators is established at air and sea ports, distribution hubs, and supply support activities where cargo and units change from one transport mode to another or where transportation assets are off-loaded and containers/pallets are reconfigured for further distribution. As radio frequency identification tagged shipping containers, vehicles, equipment, and pallets pass these interrogator locations, the interrogator reads the radio frequency identification tags and transmits the data to a regional ITV server which updates the radio frequency - in-transit visibility global network. The ITV server provides a mechanism for logisticians to query shipment status and location information. This asset visibility not only provides logisticians with a near real-time location of assets but also provides a view of potential choke points within the distribution system.

SECTION VIII – SUPPORT TO JOINT AND MULTINATIONAL OPERATIONS

1-172. Title 10, USC and DOD Directive 5100.1, Functions of the DOD and Its Major Components, describe the organization, roles, and responsibilities for the elements of the DOD to include the statutory requirements for each Military Department to provide support to assigned forces. Additional authorities to Title 10 have been developed to provide for interservice and interagency mutual support.

EXECUTIVE AGENCY

1-173. Executive agency refers to Secretary of Defense directives, instructions, and memoranda to one Service department to provide specific categories of support to other Service departments (Reference DOD Directive 5100.01).

1-174. Executive agent responsibilities are normally focused on national strategic level activities, but may also carry over to common-user logistics (CUL)-related support in a specific theater. Therefore, military department or Department of Defense-level executive agency responsibilities must be closely considered, and are normally closely aligned with combatant commander-directed lead Service or agency CUL requirements. Current Secretary of Defense directives, instructions, and memoranda are posted on the Defense Link web site.

1-175. Title 10 charges the Army with administrative control (ADCON) of Army forces assigned to combatant commands. ADCON entails providing administrative (legal, personnel, and finance) and logistic support to these forces. When designated an executive agent, the Army also enters into inter-Service, interagency, and intergovernmental agreements for certain responsibilities. These may include—

- Civil engineering support.
- Common-user land transportation.
- Disaster assistance.
- Force protection.
- Mortuary services.
- Detainee operations.
- Bulk petroleum management.

LEAD SERVICE RESPONSIBILITIES

1-176. A combatant commander may choose to assign specific CUL functions, to include both planning and execution, to a lead Service. These assignments can be for single or multiple common-user functions and may also be based on phases and/or locations within a specified area of operations.

1-177. Responsibility for lead Service functions is usually assigned to the dominate user and/or most capable Service for the common supply or service. Lead Service support functions applicable to QM organizations may include:

- Class I, II (common), III (B), and IV in-theater receipt, storage, and issue.
- Facility construction and repair.
- Airdrop equipment and systems.
- Billeting and food service support for transient personnel during other than unit moves.
- Environmental management, to include handling hazardous materials.

MULTINATIONAL SUPPORT

1-178. Although each country is responsible for providing logistic support for the forces it deploys, varying degrees of CUL support in multinational operations can be expected in order to achieve unity of effort.

1-179. There are two types of multinational operations: alliances and coalitions. An alliance is the relationship that results from a formal agreement (such as a treaty) between two or more nations for broad, long-term objectives that further the common interests of the members. A coalition is an ad hoc arrangement between two or more nations for common action. Many coalitions are formed under the guidance of the United Nations.

1-180. One or more of the following organizational and/or management options facilitates multinational support:

- National support elements provide national support.
- Individual acquisition and cross-servicing agreements provide limited support.
- A lead nation provides specific support to other contributing nations' military forces.
- A role specialist nation provides a specific common supply item or service.
- A multinational integrated logistics unit provides limited common supply and services support.
- A multinational joint logistics center (MJLC) manages CUL support.

1-181. In all cases, the multinational force commander directs specific multinational CUL support within the applicable laws and regulations of the host nation. When operating within a formal alliance, commanders and staffs execute CUL support in accordance with applicable standardization agreements or quadripartite standardization agreements. ADP 4-0 and ADRP 4-0, JP 4-07, and JP 4-08 discuss multinational logistic support.

SECTION IX – SUMMARY

1-182. Modularity is leading a transformation in which QM organizations and Soldiers are undergoing revolutionary change in order to more effectively and efficiently support requirements.

1-183. QM operations are conducted at the operational and tactical levels by a variety of organizations; enabled by a mission command system that supports effective collaboration, coordination, synchronization, and integration.

1-184. QM operations contain two functional elements: supply and field services. These functional elements and their many sub-functions are an integral component of the sustainment warfighting sub-function: logistics. The sustainment warfighting function consists of three major sub-functions: logistics, personnel services, and health services. For additional information, see ADP 4-0 and ADRP 4-0.

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Chapter 2

Supply Operations

Chapter 2 describes modular force supply operations and the support structure that will typically be used to support decisive action. Improved methodologies and a redesigned force structure give quartermaster (QM) Soldiers the ability to better organize and better provide the right support, in the right quantities, at the right place, and at the right time. Effective coordination and collaboration is essential to providing agile and responsive logistic support to supported commanders.

SECTION I – SUPPLY OPERATIONS OVERVIEW

- 2-1. There are ten classes in the Army supply system:
 - Class I, Subsistence
 - Class II, Clothing and Individual Equipment
 - Class III, Petroleum and Solid Fuels
 - Class IV, Construction Materiel
 - Class V, Ammunition
 - Class VI, Personal Demand Items
 - Class VII, Major end Items
 - Class VIII, Medical Materiel
 - Class IX, Repair Parts and Components
 - Class X, Non Military Materiel
- 2-2. Levels of supply are broadly classified under the levels of war as strategic, operational, and tactical.
 - Strategic-level supply focuses on provisioning the force. Strategic-level supplies are items under the control of the NICP. These supplies are considered inventory in motion and part of the distribution system.
 - Operational-level supply focuses on sustainment, supply unit deployment, and the distribution and management of supplies and materiel.
 - Tactical-level supply focuses on readiness. Tactical-level supplies are those items provided to and carried within each brigade combat team (BCT) or support brigade to sustain operational endurance.
- 2-3. To be successful, supply operations must be both effective and efficient. Eight sustainment principals facilitate effective, efficient supply operations. They are: integration, anticipation, responsiveness, simplicity, economy, survivability, continuity, and improvisation. See ADP 4-0 and ADRP 4-0 for more information.
- 2-4. It is generally recognized that efficiency cannot handicap effectiveness during the conduct of combat operations. In general, efficiency is the major performance objective at the strategic level and at the strategic-theater interface in a theater, theater of operations, or joint operations area (JOA). Efficient operations at the strategic level enable a geographic combatant commander (GCC) to rapidly build combat power and sustain operations. At the tactical level, effectiveness is essential to building confidence that supplies will be delivered responsively and effectively to meet commander requirements – i.e. in the right quantities, at the right place, and at the right time.
- 2-5. Modular force logistic capabilities include a centralized materiel management capability that provides increased efficiencies and effectiveness by reducing redundant materiel management layers,

centralizing materiel management functions, and employing a theater-wide view of resources. The result of which is responsive support to Army forces and reduced customer wait time.

2-6. As a result of these improved organizational efficiencies, requisitions flow from the requesting unit directly to systems controlled by theater sustainment command (TSC) materiel managers in accordance with standard operating procedures. Based on parameter settings established by TSC materiel managers, the corps/theater automatic data processing service center (CTASC) determines if the requested item is available from within the theater and directs a materiel release order to the sustainment brigade capable of satisfying the requirement. If the item is not available, the CTASC passes the requisition to the appropriate NICP for fill.

2-7. Shipments arriving in theater are routinely throughput from the port of debarkation directly to the appropriate brigade support battalion (BSB). Otherwise, shipments are directed to distribution terminals for reconfiguration or to an appropriate general support storage activity in the theater.

2-8. QM Soldiers/units conducting operational-level supply operations focus on sustainment, supply unit deployment, and the distribution and management of supplies and materiel. The operational level of supply encompasses that support required to sustain major operations; enabling success at the tactical level of war.

2-9. Contractors and civilians provide support from within as well as outside the theater or Joint Operations Area (JOA). In theater, contractors and Department of Defense (DOD) civilians perform specified supply support functions. The GCC provides guidance and priorities for operations while the Service component commanders identify operational requirements to the national industrial base and subordinate organizations.

2-10. Adequate APS and staging base capabilities are maintained to meet anticipated force requirements in a theater until sea lines of communication closure from continental United States (CONUS). APS materiel may be positioned in the theater or other designated areas to meet immediate needs whether afloat or on land at the onset of war. This dispersion of stocks also reduces vulnerability.

2-11. At the tactical-level, BCTs and support brigades have organic support capabilities that provide operational endurance. Units routinely maintain a sustaining level of supply that is formed from unit basic loads. Units may sustain operations using a **combat load – The minimum mission-essential equipment and supplies as determined by the commander responsible for carrying out the mission, required for Soldiers to fight and survive immediate combat operations.** The make up of combat loads is not standard and they do not have defined quantities established. The types and quantities of supplies will vary depending on the current mission. The combat load is replenished by the next higher source of supply.

2-12. Tactical-level supply operations focus on readiness; enabling tactical commanders to fight battles and engagements. Major emphasis is placed on arming and fueling the force, and supporting Soldiers and their systems. Tactical commanders must integrate supply support with their concept of operations during the tactical planning phase. Mobile, responsive capabilities are essential for accomplishing the supply mission. There are two standard methods of supply replenishment that are conducted in an operational environment:

- **Unit distribution – A method of distributing supplies by which the receiving unit is issued supplies in its own area, with transportation furnished by the issuing agency.**
- **Supply point distribution – A method of distributing supplies to the receiving unit at a supply point. The receiving unit then moves the supplies to its own area using its own transportation.**

2-13. Army transformation efforts have produced an improved communications network for logisticians. This improved capability provides satellite-based communications that enable logisticians to pass and receive key data essential to supporting a modular, brigade-based force. Achieving this degree of connectivity strengthens Soldier confidence by increasing visibility and enabling flexible, responsive support to known and anticipated operational requirements.

SECTION II – SUPPLY CLASSES

2-14. Supply commodities used in support of Army operations are separated into ten supply classes as a way to clearly separate and identify each commodity.

CLASS I

2-15. Class I supplies consist of perishable and semi-perishable subsistence items—or rations that are packaged as individual or group meals. Gratuitous health and welfare items are also included.

CLASSES II, III (P), AND IV – GENERAL SUPPLIES

2-16. Supply Classes II, III (packaged), and IV represent a broad range of general supplies that are less visible than other commodities. Nevertheless, they contribute significantly to mission accomplishment. Class II consists of common consumable items such as clothing, individual equipment, tentage, tool sets and kits, maps, administrative/housekeeping supplies, and chemical, biological, radiological, and nuclear protective equipment. Depending on the operational environment replenishment of Class II items can be accomplished by a method of **direct exchange – A supply method of issuing serviceable materiel in exchange for unserviceable materiel on an item-for-item basis**. Class III (P) consists of packaged petroleum, oils, and lubricants (POL) that can be handled in a manner similar to dry cargo. Class IV consists of fortification, barrier, and construction materials. Consumption of these commodities is predictable. Demand history, together with knowledge of anticipated requirements, can provide accurate forecasting of demands.

2-17. Many of the Class II, III (P), and IV items are jointly used by other Services and the civilian sector. Normally, this will provide a broad base for acquisition and a capability to increase the production base. This allows the commodity commands to rely on readily available supply sources to satisfy normal and surge requirements. On the other hand, there are items, such as clothing and maps, which are unique to the military and perhaps to the Army. The management of these items is much different, and the maintenance of the production base is much more critical. Generally, these commodities are moved to the theater by sea lines of communication.

CLASS III (BULK)

2-18. Within a theater, Army requirements for bulk Class III are coordinated through a joint petroleum office. The joint petroleum office, in coordination with the Service components and the Defense Logistics Agency-Energy Center (DLA-Energy), plans, coordinates, and oversees all phases of bulk petroleum support for U.S. forces in the theater.

2-19. Theater requirements for bulk fuel may be resourced from U.S. peacetime operating stocks or war reserves, through host nation support agreements, contracts, or from captured enemy stocks. The operational environment and degree of theater maturity will impact how bulk petroleum is received, stored, and distributed throughout the JOA. Within a theater, supply management for bulk Class III is usually a lead Service common-user logistics (CUL) responsibility. In most scenarios, the lead Service responsibility for CUL is an Army responsibility.

2-20. Petroleum supply planning falls into two basic categories - logistics and operational.

- Logistics planning requires the translation of such factors as troop strengths, numbers and types of fuel-consuming equipment and vehicles, and tactical objectives into specific fuel requirements and distribution plans. Planning of this nature is started well in advance of actual operations. The purpose of the planning is to insure that products, distribution facilities, and operating units and personnel will be available when needed.
- Operational planning includes planning both for reaching the rated capacity of the distribution system and for maintaining that capacity to meet requirements placed upon it. This planning is carried on along with operations. Revisions may be necessary because of tactical developments, losses in handling capacity due to enemy action, and other factors that keep the system from operating as planned.

CLASS V

2-21. Ammunition of all bombs, explosives, mines, fuses, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items. For more information on ammunition operations and management see FM 4-30.1. Also see ATP 4-35.1 for handling of munitions.

CLASS VI AND TACTICAL FIELD EXCHANGES

2-22. Class VI supplies (personal demand items) are Army and Air Force Exchange Service items for issue and for sale to troops and authorized individuals. Class VI supply support can be limited to basic health and comfort items or expanded to include food and beverages and entertainment items.

2-23. Army personnel normally deploy with required minimum health and comfort items. The Army Service component commander may authorize the issue of health and comfort packs through the supply system until Army and Air Force Exchange Service support can be established. Delivery of health and comfort packs is based on headcounts provided for field feeding. Health and comfort packs provide everyday necessities when the Army and Air Force Exchange Service is not available.

2-24. As requested by the GCC, Army and Air Force Exchange Service provides Class VI supply support beyond health and comfort packs. Class VI supplies may be available through procurement, through transfer from theater stocks, or through requisitioning from Army and Air Force Exchange Service in CONUS. Army and Air Force Exchange Service Class VI supply support to locations without established post exchanges is provided by tactical field exchanges or Army and Air Force Exchange Service imprest fund activities. Initially, both are operated by military personnel. Army and Air Force Exchange Service is responsible for training military personnel to operate the facilities.

2-25. In more secure areas and during stability operations, Army and Air Force Exchange Service may establish a direct operation exchange – tactical to support deployed Soldiers. In more remote areas, health and comfort packs may continue to flow through the supply system as Army and Air Force Exchange Service support may not be feasible.

CLASS VII

2-26. Class VII supplies consist of major end items such as weapon systems and vehicles. Major end items are a final combination of end products that are ready to use. They represent a low percentage of total line items but a high percentage of the total dollar value of the Army inventory. Because of the high dollar cost and their overall importance to combat readiness, major end items are usually controlled through command channels; otherwise, the TSC controls them at theater level. The requisitioning, distribution, maintenance, and disposal of these items are intensely managed to ensure visibility and operational readiness.

2-27. Worldwide requirements for major end items are individually specified, computed, and programmed to meet the requirements of current or future force structures. Major end items are controlled and distributed in accordance with carefully developed distribution plans and directions.

2-28. Requisitions for Class VII controlled items flow from standard Army retail supply system -1 (SARSS-1) sites to the CTASC and are subject to approval by TSC materiel managers in accordance with ASCC directives. If the item is on hand, the TSC cuts a materiel release order directing the issue. When the item is not on hand in theater, the CTASC passes the request to the applicable NICP for fill.

2-29. At the tactical level, BSBs may receive Class VII items via throughput from CONUS depots; via throughput from a quartermaster support company providing support from the theater sustainment base; from a quartermaster support company operating as part of a distribution hub along the intratheater distribution system; or from a QSC providing area support. Accountability of Class VII items is accomplished with the use of PBUSE.

CLASS VIII

2-30. Medical materiel and supplies to include repair parts peculiar to medical equipment. Class VIII is exclusively managed by medical support organizations and is not managed by quartermaster units.

CLASS IX

2-31. Class IX items—repair parts—consist of any part, subassembly, assembly, or component required in the maintenance or repair of an end item, subassembly, or component. They support the maintenance and repair functions performed throughout the theater on all materiel except medical.

2-32. The operational level of Class IX supply focuses on providing a safety level for all repair parts and a level of stockage for the items that will not be sent to the theater via air lines of communication. Easing these supply requirements are the serviceable assets that support maintenance company repair of line replaceable units will generate. These theater-generated assets can offset the requirement to support from the strategic level of supply.

2-33. SAMS-E and SARSS are used to maintain accountability for Class IX items. Once the repair part is issued by the unit, no further accounting procedures are required for that item.

CLASS X

2-34. Class X items support nonmilitary programs such as agricultural and economic development. If civilian resources in the theater are inadequate, military sources may provide Class X items to the civilian population. In addition, civil agencies of the U.S. government and private charitable organizations may provide supplies for civilian consumption that may or may not be distributed through military channels.

WATER

2-35. Classification of the water function is somewhat different from other commodities; it is both a supply function and a field service. Storage and distribution of potable water are supply functions. Water purification is a field service.

2-36. Water is a critical combat commodity that may require intensive management and control. In addition to drinking and cooking, it is required for hydration, sanitation, medical treatment, construction, decontamination, and maintenance. The amount of water required depends upon the regional climate and the type and scope of operations.

SECTION III – MULTI-NODAL OPERATIONS

2-37. The GCC in conjunction with United States Transportation Command (USTRANSCOM) selects the ports of debarkation that will be used for deployment in his theater. METT-TC considerations and the theater transportation infrastructure will drive the sequence, type, size of forces, and materiel arriving at ports of debarkation. These decisions impact the speed of combat power buildup and continued development of the theater. For example, APODs, aerial ports of embarkation, SPODs, seaports of embarkation (SPOE), distribution hubs, and SSAs are critical components of the intratheater distribution system. Sustainment brigades, augmented by theater opening elements, conduct port of debarkation support operations; provide life support; and execute theater distribution operations. QM units such as QMC will play an important role in receiving, storing, and issuing supplies at SPODs.

2-38. During a typical deployment, Soldiers move by airlift, and unit equipment, vehicles, and sustainment move by sealift. The ability to receive and clear transiting materiel and Soldiers is dependent upon the throughput capacity at points of debarkation. Reception, staging, onward movement, and integration (RSOI) is the process that enables the GCC to rapidly build and sustain combat power by providing for the efficient flow of materiel and Soldiers through designated aerial ports of debarkation and seaports of debarkation (SPOD). RSOI is a complex process that requires extensive coordination between strategic providers such as USTRANSCOM, theater elements such as the joint deployment distribution operations center and the senior Army command responsible for deployment and sustainment, and the deploying forces.

2-39. The senior Army command responsible for deployment and sustainment in a theater enables efficient and effective support to ARFOR by building a theater infrastructure from a combination of existing and

deployable assets capable of supporting deployment, employment, and sustainment. A number of METT-TC factors will determine the logistic structure of a JOA..

2-40. An integrated in-transit visibility (ITV) network enables commanders at all echelons to see units and sustainment in motion, permitting them to effectively make decisions and implement action. These same capabilities give logisticians a common operational picture (COP) that enables control throughout the distribution system.

AERIAL PORTS OF DEBARKATION / EMBARKATION

2-41. Air Mobility Command is the U.S. Air Force airlift component of the USTRANSCOM and serves as the single port manager (SPM) for air mobility. APOEs and APODs are usually designated joint aerial complexes and managed by Air Mobility Command. Where designated, Air Mobility Command is also the operator of common-use APOEs and/or APODs.

2-42. The operation of a joint aerial complex can be divided into two parts: air terminal operations and air terminal support operations. The Air Force is responsible for air terminal operations that include air terminal control, loading, unloading, and servicing of aircraft. The Army is responsible air terminal support operations that include port clearance, operation of holding and marshalling areas, postal operations, personnel processing, movement control, onward movement, security, and life support. Some of these functions may be performed at locations other than the joint aerial complex. QM mortuary affair units may also play a critical role in the processing evacuation of remains.

2-43. Most aerial ports of debarkation function not only as a port of debarkation for deploying forces but also as a port of embarkation for forces moving to other theaters and noncombatant evacuation. Additionally, a host nation may limit the aerial ports of debarkation and aerial ports of embarkation to coalition military use or the military may share the facility with commercial activities. In the latter case, commercial carriers, governmental and nongovernmental agencies, private volunteer organizations, and the military will often compete for use of limited resources.

SEAPORTS OF DEBARKATION / EMBARKATION

2-44. The Military Surface Deployment and Distribution Command (SDDC) is the Army surface transportation component of USTRANSCOM and is DOD's single port manager at the SPOE and the SPOD. SDDC's relationship with a specified GCC is supporting to supported (unless otherwise specified by the Secretary of Defense).

2-45. An SPOD can be a fixed facility capable of discharging a variety of vessels; an austere port requiring ships to be equipped with the capability to conduct their own offloading; or bare beach facilities that necessitate executing logistics-over-the-shore operations.

2-46. SPODs, like APODs, are subject to competition from competing entities: host nation, military, commercial carriers, and governmental and nongovernmental agencies.

2-47. SDDC performs SPM functions necessary to support the strategic flow of the deploying forces' equipment and supplies to and from the theater. In carrying out this responsibility, SDDC works closely with the joint deployment distribution operations center and the senior Army command responsible for deployment and sustainment to coordinate the arrival, discharge, or loading of vessels in accordance with GCC priorities.

2-48. As SPM, SDDC is also responsible for providing management of all port operations within the port to include coordinating workload requirements, water-side port security, and port support activities.

2-49. The SPM may have operational control of a port support activity. The port support activity is an ad hoc organization comprised of personnel with the skills necessary to receive, process, and clear cargo from the SPOE or SPOD. The composition of the port support activity varies with the mission to be supported and can be military, civilian, or host nation support or a combination of these. The port support activity works directly for the port operator who reports to the port manager. The port support activity assists in moving unit equipment from the piers to the staging/marshaling/loading areas, assisting the aviation support element with movement of helicopters in preparation for flight from the port, providing limited

maintenance support for equipment being offloaded from vessels, limited medical support, logistics support, and security for port operations. A QM supply company may be used to receive, store, and issue supplies at the port for follow-on movement.

DISTRIBUTION HUBS

2-50. A network of distribution hubs is established throughout a theater in order to effectively support ARFOR requirements and maximize the efficiency of the intratheater distribution system. A distribution hub is a complex of capabilities designed to enable throughput. A distribution hub may be established in the vicinity of APODs/APOEs, SPODs/SPOEs, or at other critical points along the intratheater distribution system.

2-51. Planning criteria for establishing an intratheater distribution hub include, among other considerations: requirements for changes in transportation mode; main supply route structure; distance factors; control; and disposition of supported forces.

2-52. A distribution hub may establish one or more distribution terminals for cargo. The distribution terminal uses cross-dock efficiencies to segregate and ship cargo to consignees or other distribution hubs in the intratheater distribution system. The distribution terminal consists of a transportation cargo transfer element and a servicing movement control team. Distribution terminal operations include the following:

- Segregating, consolidating, manifesting, staging, and delivering cargo to customers over established routes according to a time definite delivery schedule.
- Preparing automated manifest system cards and radio frequency tags for cargo to ensure TAV/ITV from distribution terminal to the ultimate consignee.
- Receiving, repackaging, redistributing, and retrograding cargo.
- Coordinating mode asset, pallet, and container arrival and departure, and providing timely cargo ITV reports to logistic databases.
- Reading source data automation of cargo arriving and departing the distribution terminal.
- Staging and marshaling trailer loads for delivery.

2-53. At a theater-level distribution hub, materiel packaged for a single consignee is received, processed, and throughput directly to the designated SSA. Materiel packaged for multiple customers is separated at a distribution hub, segregated by SSA and Department of Defense activity address code (DODAAC), reconfigured, and then shipped to the appropriate SSA.

SUPPLY SUPPORT ACTIVITIES

2-54. A network of SSAs is established throughout a theater in order to effectively support ARFOR requirements. Throughput from theater ports of entry to SSAs and/or end users is maximized to increase operational agility.

2-55. Supply operations at SSAs involve the storage, distribution, requisition, protection, maintenance, and salvage of supplies. SSAs may provide a mix of supply classes to include: Class I, II (including paper maps), III (packaged and bulk), IV, V, VII, VIII, and IX. Distribution methods used by SSAs include unit distribution or supply point distribution.

- Unit distribution: Supporting SSA delivers supplies to supported units.
- Supply point distribution: Supported units pick up supplies from supporting SSA.

2-56. Although some stocks are retained in theater during peacetime (i.e. Class VII) most supplies used to resource SSAs for contingency operations will be by direct delivery from a supporting CONUS area oriented depot. The Army relies on the defense transportation system to resupply SSAs directly from CONUS. Strategic-level distribution is accomplished by direct supply support using surface transportation, sea lines of communication and air lines of communication. The flow of supplies into an operational area must begin prior to or concurrently with the flow of units and personnel to a JOA in order to effectively build and sustain combat power.

2-57. Each SSA will develop an authorized stockage list to support its customer units. An authorized stockage list review and analysis board will be conducted at least once every year. If agreement cannot be achieved at the local level, items or requisitioning objectives that are in dispute will be referred to the ASCC for negotiation with United States Army Materiel Command (USAMC).

SECTION IV – UNIT SUPPLY OPERATIONS

2-58. An organization's supply operation is structured under a modified table of organization and equipment, a table of distribution and allowance, or a joint table of allowances. It is responsible for identifying, acquiring, accounting, controlling, storing, and properly disposing of material authorized to conduct the mission of the unit or used to garrison, equip, and maintain the Soldier. The following paragraphs address the essential elements necessary to achieving effective supply support.

ACCOUNTABILITY AND RESPONSIBILITY

2-59. Property accountability is one of the greatest challenges a commander will face during his tour. The commander can do many things during a command tour but still fail as a commander if he does not maintain proper accountability of his equipment. The commander has the responsibility to keep the unit's property in serviceable condition. The commander must stress to the Soldiers that each person is responsible for all property in his charge and not just for property that is listed on the unit property books. Commanders must also ensure their Soldiers properly account for unit property. Army regulation (AR) 710-2 and AR 735-5 contain the Army policy for property accountability and responsibility. DA PAM 710-2-1 contains the manual procedures for property accountability. DA PAM 735-5 contains procedures for officers conducting a financial liability investigation of property loss.

PROPERTY ACCOUNTABILITY

2-60. Property accountability is the obligation of a person to keep an accurate formal record of property issued to him. The record should show item identification data, quantities, balances, and transactions. This obligation may not be delegated. An accountable officer does not have to personally make all detailed entries on property records. However, he must:

- Make sure that the property issued to him is correctly noted on the property records.
- Know what is on hand as determined by the property records.
- Take action to resolve shortages or overages.

PROPERTY RESPONSIBILITY

2-61. Property responsibility is the obligation of a person to ensure that government property entrusted to his possession, command, or supervision is properly used and cared for and proper custody and safekeeping are provided. There are three types of responsibility based on position within the organization, and a fourth type based on signatures. The four types of responsibility are shown below:

- Direct responsibility is the obligation of a person to ensure all government property for which he or she is receipted, is properly used and cared for. Direct responsibility results from assignment as an accountable officer, receipt of formal delegation, or acceptance of the property on hand receipt from an accountable officer or other hand receipt holder.
- Command responsibility is the obligation of a commander to ensure the proper care, custody, and safekeeping of all government property within the command. He has this command responsibility for unit property whether he has signed for it or not. He must personally ensure the security of all unit property whether it is in storage or in use.
- Supervisory responsibility is the obligation to ensure the proper use, care, and safekeeping of government property issued to or used by subordinates. Supervisors can be held liable for losses incurred by their subordinates.
- Personal responsibility is the obligation of individual Soldiers to ensure the proper use, care, and safe keeping for all arms, hand tools, and organizational clothing and individual equipment issued to them for their use. They are responsible whether they signed for the property or not.

PROPERTY RECORDS

2-62. There are two categories of Army property. They are real property and personal property. Real property includes land and structures. Personal property includes equipment and other nonexpendable supplies. Property records are concerned with accounting and assigning responsibility for nonexpendable property and for controlling durable and expendable property. Methods used maintain control of real and personal property include property books; hand receipts; inventory lists; and transfer documents.

PROPERTY BOOKS

2-63. Property books are formal records of nonexpendable property assigned to organizations and activities. DA PAM 710-2-1 lists the property that must be accounted for on property books. Property books are either automated or manual DA Form 3328 (Property Record). Organizations and activities using an automated property book accounting system are not required to keep manual records that duplicate information available from the automated system. However, all property book systems must be maintained using AIT and must integrate with current standard Army management information system's automated information systems. In addition property book records must provide a complete trail for all transactions suitable for audit.

2-64. Authorized allowances will be reconciled annually with appropriate authorization documents. A statement indicating that this reconciliation has been accomplished by the property book officer (PBO) will be submitted to the commander for whom the property book is maintained. The commander or designated representative will personally acknowledge the reconciliation in writing and has a copy filed in the front of the property book.

HAND RECEIPTS

2-65. A hand receipt is a listing of nonexpendable and durable items (other than components) which have been issued to an individual, section, or unit. The signature on a hand receipt establishes direct responsibility for that item. Hand receipts are also accountable records of all nonexpendable and durable property. Manual systems use the DA Form 2062 (Hand Receipt/Annex Number) as hand receipt documents to account for property at company, unit, or activity level. It is used to assign responsibility to the supervisor and user levels. Instructions for preparing the DA Form 2062 are found in PAM 710-2-1. Automated systems use machine listings as hand receipt documents. These are prepared and maintained according to PAM 710-2-1 and the system end users manual.

2-66. Hand receipt annexes are used between the PBO and primary hand receipt holders and between primary hand receipt holders and sub-hand receipt holders. When an item with components is issued on a hand receipt or sub-hand receipt, any shortage of nonexpendable or durable components must be recorded on a hand receipt annex.

INVENTORY LISTS

2-67. The PBO or responsible officer may encounter a situation where it is impractical to assign further responsibility for property. For example, this could happen in the case of multiple-use classrooms, or dayrooms used by more than one unit. In this case, the responsible officer or PBO may manage the property using an automated list or DA Form 2062 as an inventory list. When using the inventory list method, the PBO or responsible officer must inventory the property semiannually. The list will be prepared and managed according to the provisions of DA Pamphlet 710-2-1.

TRANSFER DOCUMENTS

2-68. Units can transfer items laterally to other units, when authorized or when directed by the appropriate level of command, depending on the type of property involved. These transfers can be posted to the hand receipt using the DA Form 3161 (Request for issue or Turn-in). Procedures for lateral transfer actions are contained in DA PAM 710-2-1.

INVENTORIES

2-69. An inventory is the physical count of all supplies and equipment on hand. Property records must be kept up to date so they show the quantities on hand and inventories must be taken to verify the quantities on hand agree with the property records. At unit level, items on hand receipts and balances on shop supply lists must be inventoried. Then the records are reconciled and action taken when items are missing, damaged, or destroyed. When assuming command, the incoming commander must complete a 100 percent physical count of all property, including components of end items, sets, kits, and outfits.

2-70. There are several types of inventories required at unit level. Some are event oriented, such as a change of the primary hand receipt holder. Other inventories are type of property oriented, such as arms, ammunition, and organizational clothing and individual equipment.

2-71. The key inventories commanders need to conduct in order to maintain supply discipline are: change of primary hand receipt holder (also known as change of command), annual/cyclic, and sensitive items. Understanding the different inventory types and conducting them as required will allow commanders to keep track of their assigned property.

PROPERTY RECORD ADJUSTMENTS

2-72. Commanders must decide the appropriate action to take to adjust the property records and account for the differences when the records do not match the quantities on hand or when supplies or equipment are damaged or destroyed. Overages may be adjusted by adding the items to the property record, transferring it to another unit, or turning the item in as found on installation.

2-73. A loss of property must be investigated and the facts determined. If the person holding the hand receipt for the item admits liability, the item can be accounted for using a statement of charges or a financial liability investigation of property loss. When no liability is admitted, causative research must be conducted before beginning the investigative procedures. This is done to determine whether there was an actual loss or if the discrepancy is simply an accounting error. When gross negligence is suspected, an investigation under AR 15-6 may be warranted. AR 735-5 gives guidance on when to use the financial liability investigation of property loss process and when an investigation under AR 15-6 should be initiated.

2-74. A commander at any level or a primary staff officer of a general court marshal convening authority can appoint an officer or a board of officers to make an informal investigation. The appointment may be oral or written. It should specify the purpose and scope of the investigation, the nature of the findings, and the recommendation(s) needed.

2-75. A financial liability investigation of property loss is used as a means of reestablishing accountability for lost, damaged, or destroyed supplies and equipment. When there is no admission of liability for a loss or when a person admits liability for the loss but the loss is greater than one month's basic pay for that person, then a financial liability investigation of property loss should be initiated. The financial liability investigation of property loss is not intended as a means of punishment. The commander still retains the option of administering non-judicial punishment under Article 15 of the Uniform Code of Military Justice or convening a court marshal.

2-76. When a person admits liability, they may be offered the option of reimbursing the government by using Department of Defense (DD) Form 362 (Statement of Charges/Cash Collection Voucher) or DD Form 1131 (Cash Collection Voucher). These forms may not be used for reimbursement to the government if the costs exceed one month's basic pay for that individual. The procedures for preparing these forms are contained in AR 735-5.

2-77. Property records may be adjusted when there are administrative changes or minor errors. Although they are called minor, they correct inaccuracies in the records. However, minor adjustments do not affect or correct the on hand balance on property books. The following are examples of when an administrative adjustment report might be used:

- National stock number changes - for similar makes and models.
- Size corrections.
- Unit of issue changes.

- Items changing from accountable to non-accountable.
- Items changing from non-accountable to accountable.

SECTION V – SUMMARY

2-78. Quartermaster Soldiers plan, prepare, execute, and assess the sustainment warfighting sub-function: supply. This sub-function is performed at the strategic, operational, and tactical levels. When synchronized with the other sub-elements of the sustainment warfighting function and a commander's battle rhythm, effective supply operations enable operational reach and prolong endurance. Integrating the many elements of supply into sustainment operations is essential for mission success. Quartermaster Soldiers at each warfighting level conduct vertical and horizontal staff coordination in order to effectively execute sustainment operations conducted in support of operation plans.

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Chapter 3

Field Service Operations

Chapter 3 describes the field services provided by quartermaster (QM) Soldiers and units at the operational and tactical levels in support of decisive action. Field service functions include: aerial delivery, clothing and light textile repair, food services, shower and laundry, mortuary affairs, and water purification. During offensive and defensive operations, most of the field services support provided at the tactical level will be provided by Army personnel, with only a limited amount being provided by host nation support or contractors. Conversely, at the operational level, most field services will be provided by host nation support or contractors. During stability operations or civil support operations, field services support at all levels may come from a variety of sources. Field services are essential for enhancing Soldiers' quality of life while deployed. Although not a subset of field services, a force provider discussion is included in this chapter due to its contribution to Soldier quality of life.

SECTION I – AERIAL DELIVERY

3-1. Today's aerial delivery includes airland, airdrop, and sling load operations. Airland and airdrop operations are joint operations (Army and Air Force) that require large fixed-wing aircraft. Sling load operations are usually Army operations; and are conducted using utility and cargo helicopters.

3-2. Aerial delivery provides a means of delivering sustainment packages to distributed forces quickly and accurately while protecting the distribution asset by employing stand-off delivery. Aerial delivery may be employed primarily as a means of delivering supplies to small scale forces in isolated locations by parachute.

3-3. One of the dangers faced by Soldiers in tactical situations is improvised explosive devices. Aerial delivery provides the means to mitigate improvised explosive device hazards associated with sustainment convoys. It also provides the flexibility necessary to effectively sustain Soldiers throughout a JOA.

3-4. Aerial delivery assets are immune from IEDs and mines and their freedom of maneuver, speed, and agility make them a viable distribution option. Routine delivery of supplies and equipment to units operating in noncontiguous areas of operations can be by either airland; conventional airdrop equipment; precision guided parachutes from low level or high altitude stand-off distances; or sling load. Exactly how a receiving unit gets the supplies depends, in large part, on the needs of the unit. These needs will drive the selection of aircraft, methods, and rigging equipment used. The decision process requires support operations to weigh the numerous aerial delivery advantages and disadvantages to determine whether airland, airdrop, or sling load best suits the situation.

3-5. Under the modular force design, aerial delivery is increasingly employed as a routine distribution method. When applied together with surface distribution operations, aerial delivery enables maneuver forces to engage in a battle rhythm which is not as restricted by geography, supply routes, tactical situations or operational pauses for logistic support.

3-6. For many types of operations, aerial delivery will, by necessity, be an equal partner with other forms of sustainment distribution. Therefore, logistics planning should reflect the habitual use of aerial delivery at the operational and tactical levels. From a sustainment perspective, mission command of aerial delivery begins with the proper mix of the units discussed in chapter 1. Those resources must be in place during theater opening in order to establish an aerial distribution system that is both efficient and effective. For more information regarding aerial delivery, reference FM 4-20.41

AIRLAND

3-7. To be successful, both airland and airdrop operations require an extensive Army and Air Force support structure working as a team with complementary skill-sets. The Air Force controls aircraft loading and provides aircraft assets; the Army provides and orchestrates the preparation and rigging of Army sustainment requirements. Most of the support structure is common to both modes of aerial distribution and are generally not fixed. The most notable exception is the Army airdrop-related units that rig cargo for airdrop.

3-8. Airland operations provide for greatest cargo tonnage movement and are conducted routinely on an intertheater basis. Using this method, air carriers normally terminate at a relatively secure aerial port of debarkation, physically descending, landing, and spending time on the ground to off-load. In doing so, supplies and equipment are normally introduced to the ground for onward movement and distribution.

3-9. Intratheater airland capabilities normally provide for limited transport of time-sensitive/mission-critical cargo and key personnel to forward deployed Army units operating in a JOA. Austere airfields within a JOA may restrict the use of fixed-wing aircraft. This may be due to threat conditions, airfield classification, or off-load capabilities. In which case, cargo is delivered as far forward as feasible for further movement by Army rotary wing aircraft or ground transportation.

3-10. The advantages of using airland include:

- Airland allows equipment that is not air-droppable, such as tanks and some artillery, to be rapidly brought into a JOA.
- Airland allows a greater degree of unit integrity and the capability to rapidly employ units after landing.
- Airland does not require specially trained personnel to prepare supplies for delivery.
- Airland permits the maximum utilization of aircraft load capacity.
- Airland allows aircraft to be used for backhaul or evacuation of personnel.
- Airland has a low cost per ton of cargo moved ratio.

AIRDROP

3-11. Airdrop resupply operations apply to all Army forces. The airdrop function supports the movement of personnel, equipment, and supplies. It is a vital link in the distribution system and provides the capability of supplying the force even when ground lines of communication have been disrupted or terrain is too hostile, adding flexibility to the distribution system.

3-12. Airdrop operations provide for the ability to supply and distribute cargo, using parachutes and platforms to release supplies and equipment from an aircraft while in flight. Modern airdrop systems have a mix of delivery capabilities to support operations ranging from conventional parachutes to platforms that can be dropped at ultra low altitude to high altitude precision systems with substantial stand-off capabilities. High altitude precision systems may be used to deliver supplies to units deployed across the JOA, in fixed locations, or on patrol for routine or emergency resupply.

3-13. Continued innovation in air drop methods will allow for support from greater distances and from high altitude with significantly increased on-ground accuracies. Today, an autonomously guided, precision airdrop system, employed from high altitudes and offset from drop zones can deliver critical warfighting supplies to within 150 meters or better of its planned ground location. Low altitude airdrop improvements provide for increased on-ground accuracy and greatly reduced airdrop equipment costs.

3-14. Airdrop resupply support must be flexible. Certain contingencies may require airdrop resupply from the beginning of hostilities. However, the requisite airdrop support structure may not be in place due to time-phased force and deployment list priorities. In such cases, supplies should be rigged for airdrop at the strategic level and flown directly to the airdrop location.

3-15. There are three types of airdrop: freedrop, high-velocity airdrop, and low-velocity airdrop. The type of airdrop used for a specific mission depends on what is to be dropped, how much accuracy is required, the threat situation, and available airdrop equipment.

- Freedrop may be used to deliver humanitarian aid such as humanitarian daily rations. Freedrop may also be used to deliver non-fragile items such as baled clothing, fortification, and barrier materials. Freedrop does not employ parachutes or other devices that decrease the rate of descent of supplies; however, in some cases, energy-dissipating material, such as honeycomb, may be placed around the supplies to lessen the shock when the load impacts with the ground.
- High-velocity airdrop. High-velocity airdrop is used when the threat to delivery aircraft is high. In order to achieve accuracy, a small parachute provides enough drag to hold the load in an upright position while allowing a rapid rate of descent. The rapid rate of descent mitigates drift. Energy absorbing material is used to reduce the shock when the load impacts with the ground.
- Low-velocity airdrop. Low-velocity airdrop can be used for all supplies and equipment certified for airdrop. Multiple parachutes can be used to achieve a desired rate of descent.

3-16. The advantages of airdrop include:

- Airdrop can be used when no other means for transporting supplies or equipment is available.
- Airdrop permits throughput of supplies from the strategic and operational levels directly to the using unit.
- Airdrop is not dependent on the availability of forward airfields, landing zones, or materiel handling equipment.
- Airdrop reduces in-transit time and handling requirements from the source of supply to the ultimate user.
- Airdrop, as opposed to airland, enables a shorter aircraft turnaround time and reduces overall operational risk to the aircraft.

SLING LOAD

3-17. A sling load is an external load carried beneath a utility or cargo helicopter held in place by a sling, bag, or net. Weather conditions, mission requirements, threat, and cargo and equipment to be delivered determine the equipment and type of aircraft used for the delivery.

3-18. The sling load method of carrying cargo and equipment overcomes many of the problems associated with other modes of movement by bypassing surface obstacles. It provides supported commanders with greater responsiveness and flexibility by reducing customer wait time.

3-19. In addition to the movement of supplies and equipment throughout a JOA, sling load operations are used extensively in the ship-to-shore movement of cargo and equipment during amphibious operations, vertical replenishment of ships, and firepower emplacement. The sling load equipment used largely depends on what needs to be carried, the number of lift points, and the weight.

3-20. Helicopters provide a major contribution to distribution operations by quickly delivering items over relatively large distances while minimizing the threat from mines and IEDs. When planning sling load operations considerations should include the weight of the load and the time available, the altitude, temperature, and air density has on a helicopter's lift capacity. Wind can also affect the lift capacity of a helicopter and its ability to hover.

3-21. Advantages of sling load include:

- The rapid movement of heavy / outsized equipment or emergency supplies delivered directly to the user.
- The ability to bypass surface obstacles.
- The rapid relocation of supplies and equipment.
- The use of multiple flight routes and landing sites to enhance sustainability and security of ground units.
- The establishment of multiple landing sites to support maneuver unit requirements.
- Greater movement flexibility for the ground commander to accomplish the tactical mission.

3-22. Unified land operations require a highly mobile logistics support capability to sustain our maneuver brigades. It follows, then, that logisticians and supported units will be involved in sling load operations.

Ground crew teamwork and proficiency are important to the success of sling load operations. How well ground crew personnel are trained and how familiar they are with their equipment may determine the final outcome of the mission. All units should have an ongoing sling load training program to keep their ground crews current on unit equipment and to train new ground crew personnel.

SECTION II – CLOTHING AND LIGHT TEXTILE REPAIR

3-23. During contingency operations, clothing and light textile repair is provided from the operational level with projection as far forward as the brigade area. Clothing and light textile repair is performed by the Quartermaster field services company shower, laundry, and clothing repair sections. Repairs are limited to individual clothing of units being supported with shower and laundry services. No single repair shall exceed five minutes in duration and no item of clothing will be repaired if total repairs exceed 15 minutes. Any items exceeding these limitations will be returned to the Soldier for replacement through normal supply channels. More information regarding fabric repair, reference TM 4-42.21.

SECTION III – FOOD SERVICES

3-24. The Army food program and the Army field feeding system provide commanders with flexible Class I support and field feeding systems that can be tailored to tactical situations and unit missions in both training and operational environments.

3-25. The approved feeding standard for the Army field feeding system is three quality meals per day. This standard is achieved by using a combination of unitized group rations (UGR) and individual operational rations. The normal daily ration mix for the Army field feeding system is UGR/individual meal/UGR. Mission, enemy, terrain and weather, troops and support available, time available and civil considerations (METT-TC) will influence a deployed unit's ability to distribute, prepare, and serve meals to this standard. For more information regarding food services, reference ATTP 4-41.

CONTINGENCY PLANNING

3-26. Class I support plans for contingency operations vary depending on the mission and location of each operation. For example, units may be alerted to deploy directly into combat, humanitarian, or peacekeeping missions. Units may deploy into a developed location with an existing logistic infrastructure or an undeveloped location with limited or no host nation logistics support capabilities.

3-27. Theater level logistic planners are responsible for developing contingency operations Class I support plans for the theater. The plan is based on ASCC guidance, METT-TC, and the logistic capabilities available within the JOA. Class I support plans typically provide maximum flexibility to the supported units in order to meet the ARFOR commander's priorities for Class I support during all phases of the contingency operation.

3-28. Commanders and logistic planners of deploying units should begin immediate coordination with their respective theater logistic planners and review the contingency operations feeding plan timeline shown in Department of the Army Pamphlet (DA PAM) 30-22.

CLASS I SUPPORT ACTIVITY

3-29. During the early stages of deployment a push system is used to fill anticipated Class I requirements. Under a push system, a command-planning cell determines the types and amounts of rations to be shipped to each Class I supply point. Quantities and types of rations ordered and shipped under the push system are based on anticipated troop strength, unit locations, type of operations, and feeding capabilities. A push system ensures that rations are available in the operations area; however, rations may not be in the right supply point in sufficient quantity to support units, and units have limited control over the types of rations they receive.

3-30. When sufficient food service personnel and equipment are in the JOA, a pull system is implemented. A pull system provides tighter control of subsistence while being responsive to the users' desires, but

requires longer ordering lead times than a push system, normally 5 to 7 days between the date the meals are requested and the date the meals are served.

3-31. As the intratheater distribution system matures and unit capabilities to store and prepare rations improve, use of the UGR family of rations (UGR- heat & serve [H&S], UGR-A, and UGR-A with a short order enhancement) is implemented upon the approval of the theater commander.

FIELD FEEDING

3-32. Army food service personnel use organic field kitchen equipment or force providers depending on the location and mission of their units. Ration cycles for unit field kitchens include: UGR (H&S), UGR-A, and UGR-A supplemented with the UGR-A short order supplemental menus.

3-33. As logistic operations move into a sustain phase, theater logistic planners may seek to transition to logistics civilian augmentation program (LOGCAP) or direct contracts using host nation contractors for field feeding. These contractors may use force provider facilities or they may construct modular buildings or tents for use as cooking and feeding facilities.

SECTION IV – SHOWER AND LAUNDRY

3-34. During contingency operations, shower and laundry services must be provided on a timely, efficient basis in accordance with the supported unit's needs. Shower and laundry support is provided from the operational level with projection as far forward as the brigade area. The goal is to provide Soldiers with two showers each week. In addition, soldiers will be provided up to 15 pounds of laundered clothing each week. Soldiers receive their clothing back from the tactical laundry within a 24-hour period.

3-35. Shower and laundry services are performed by field services company shower, laundry, and clothing repair sections. A minimum of seven minutes will be provided for showering per person. Showers may be provided more often when extremes of climate, dust, insects, or other conditions cause a need for more frequent showers.

3-36. As required, showers will be capable of accommodating both males and females separately. Units receiving shower service will provide the necessary security required for their personnel and valuables while showering.

SECTION V – MORTUARY AFFAIRS

3-37. The DOD Mortuary Affairs Program is a broadly based military program providing for the necessary care and disposition of missing and deceased personnel, including personal effects (PE). The DOD Mortuary Affairs sub-program is divided into three distinct programs: Current Death Program, Concurrent Return Program, and Graves Registration Program.

3-38. As the Department of Defense (DOD) executive agent, the Secretary of the Army is responsible for maintaining a force structure to perform the Mortuary Affairs theater level missions and provide backup support to other Services upon request. Theater level missions include operating mortuary evacuation points, personal effects depots, and the contaminated remains processing mission.

3-39. Geographic combatant commanders (GCC) have overall responsibility for MA activities within their theaters. GCC duties include, but are not limited to, the following:

- Establishing a joint mortuary affairs office within their commands to provide oversight of MA support and operational guidance.
- Giving authoritative direction and guidance on MA to all assigned and attached forces.
- Controlling and coordinating MA operations for the search, recovery, tentative identification, care, and evacuation of deceased U.S. personnel within their theaters.

3-40. Joint mortuary affairs office oversight responsibilities include implementing established procedures concerned with search for, recovery and evacuation, and tentative identification of human remains. Other significant responsibilities include the following:

- Providing procedural guidance concerning transfer of adversary, multinational military, and civilian human remains and their PE to the custody of another government, including maintenance of records required by the Geneva Conventions.
- Coordinating the development of the MA support plan for the theater. Ensuring all Service components are informed of support locations and comply with directives.
- Maintaining a central records point for deceased personnel and PE.
- Continuing to function after periods of military operations to oversee Service efforts to resolve the status and affect the evacuation of human remains and PE not previously accomplished.

3-41. The ASCC is normally designated lead Service for the theater MA program. ASCC responsibilities include:

- Maintaining an MA force structure capability to provide support to Army units and general support (GS) to the other Service component commands.
- Subject to availability of MA force structure, provide to any operational commander, a cadre to supervise the establishment of a MACP as designated by the appropriate commander.

3-42. The Theater Sustainment Command (TSC) is the Army organization responsible for executing the MA support mission. The TSC provides C2 - to include coordinating time-phased force and deployment list sequencing of MA assets capable of providing support to Army forces and GS to the other Services. GS, as it relates to MA operations is defined as activities related to operating mortuary evacuation points, personal effects depots, and the contaminated remains processing mission, and any mutually agreed-upon support.

3-43. In general, MA operations consist of search and recovery (unit); receiving, processing, tentative identification, and evacuation of human remains and accompanying PE (mortuary affairs collection point); and receiving and evacuating of all human remains and their accompanying PE to a military mortuary (theater mortuary evacuation point). For more information on MA operations, see FM 4-20.64 and JP 4-06.

SEARCH AND RECOVERY

3-44. Unit commanders are responsible for initial search and recovery operations within their area of operations. Search and recovery is a systematic process of searching for human remains and PE, plotting and recording their location, and moving them to an MA facility. These actions are conducted by MA organizations as well. In situations when a unit is unable to recover its own human remains, the unit coordinates with the appropriate higher headquarters to request search and recovery support from a supporting MA activity.

3-45. After recovery, human remains and PE are moved to the nearest mortuary affairs site. Human remains should be transported in the most expedient manner available. However, use of medical and food-bearing vehicles should be avoided. Fixed or rotary wing aircraft are the preferred method to evacuate human remains.

MORTUARY AFFAIRS COLLECTION POINT

3-46. A MACP provides receipt, processing, tentative identification, and evacuation of human remains and their accompanying PE, usually to a theater mortuary evacuation point (TMEP). To accomplish this mission, MACPs are established in one of two ways. MACPs that provide support to a brigade combat team (BCT) are highly mobile; and are usually collocated with the BCT brigade support battalion (BSB). MACPs that have a general support relationship with multiple units are more stationary in their operation and are typically located at large logistic bases. These points operate in a more traditional manner. These points may be task organized with increased receiving, processing, refrigeration, and evacuation capacities to serve as a transit or intermediate point for MACPs providing support to forward elements. While these points are more fixed in nature, they maintain the capability to deploy forward.

3-47. When tasked, a MACP conducts or provides personnel to perform or supervise search and recovery missions. MACPs are highly mobile, enabling them to support combat maneuver elements, but can remain fixed to support a general area.

THEATER MORTUARY EVACUATION POINT

3-48. A TMEP provides GS in the receipt and evacuation of human remains and their accompanying PE to a military mortuary. The TMEP also performs quality assurance checks on existing processing documentation and initiates any additional processing documentation that is required to evacuate human remains.

3-49. TMEPs are usually located near aerial ports of embarkation in order to facilitate the movement of deceased U.S. military and civilian personnel to continental United States (CONUS) and/or outside continental United States military mortuaries.

PERSONAL EFFECTS DEPOT

3-50. The handling of PE in a theater is based on the MA support structure that is in place. If it is determined that a PE depot best supports the mission by being assigned within the theater, then it will generally be collocated with a TMEP. The primary mission of the PE depot is to receive, safeguard, inventory, store, process, and make final disposition of PE for deceased and missing personnel.

3-51. When a PE depot is established, the need for the Service to handle the final disposition of PE is eliminated. All units must know the location of the PE depot as they are required to send the PE of killed in action and missing in action Soldiers and civilians through this element.

3-52. A PE depot within a theater normally processes the PE for evacuation to a U.S.-based personal effects depot for permanent disposition. A theater PE depot from within the combatant command may process PE for permanent disposition under special circumstances.

SECTION VI – WATER PURIFICATION

3-53. The purpose of water purification is to reduce the concentrations of health-related contaminants in water to a level that will make the water potable. Purification is also used to improve the aesthetic characteristics of water in order to make it palatable. Within a JOA, water quality monitoring is primarily the responsibility of preventive medicine personnel of the Medical Command (Deployment Support).

3-54. Today, water purification operations are conducted at the operational and tactical levels. For example, at the operational level, QM water purification and distribution companies conduct reverse osmosis-based water purification operations in conjunction with storage and distribution activities. Their primary role is to build and sustain a GS base for bulk potable water. At the tactical level, improved water purification, storage, and distribution capabilities have been achieved through the employment of high mobility multipurpose wheeled vehicle-mounted light water purification systems; enabling a greater degree of operational endurance for BCTs. For more information regarding water operations, reference FM 10-52.

REVERSE OSMOSIS-BASED WATER PURIFICATION SYSTEMS

3-55. Reverse osmosis-based water purification systems reliably and consistently produce potable water from virtually any water source. The Army's reverse osmosis-based water purification systems are multi-process systems that remove all waterborne infectious materials such as parasites, bacteria, and viruses. When there is a risk of contamination by highly toxic materials such as chemical warfare or nuclear agents, reverse osmosis-based water purification systems process water through activated carbon and ion exchange filters to ensure contaminant removal. This additional treatment is also effective against most toxic industrial chemicals.

3-56. Five different reverse osmosis-based water purification system capabilities have been developed to satisfy Army requirements. They produce potable water at rates of 125 gallons per hour, 600 gallons per hour, 1,500 gallons per hour, and 3,000 gallons per hour.

SECTION VII – FORCE PROVIDER

3-57. Force provider is a modular, highly deployable system designed and authorized to provide Soldiers temporary relief from the rigors of combat. It can be used to support a variety of missions throughout a

theater. These missions include theater reception, reconstitution, and redeployment or any other mission requiring quality-of-life support for large numbers of Soldiers.

3-58. The force provider company can mission command up to six modules and can support approximately 3,600 Soldiers plus the required operating staff. Each module is equipped to provide: 1650 meals per day, climate controlled billeting, hot showers, private latrine facilities, 15 pounds of laundry per person, and facility space for morale, welfare, and recreation activities and finance, personnel, and medical facilities.

3-59. Force provider can be operated by any combination of military, LOGCAP, contractors, host nation support and/or third country nationals. Force provider can also be operated entirely by LOGCAP contractors, independent of any military mission command.

3-60. Each force provider deployment requires a containerized chapel to meet base camp religious support needs. Single-module base camps require one chapel and multi-module base camps require one chapel for every two modules. The force provider company depends on support from engineer, water, prime power, transportation, military police security, and medical units.

CONTAINERIZED CHAPEL

3-61. A containerized chapel includes all equipment and supplies needed to provide a fully functional base camp chapel consisting of tentage, seating for 100, environmental control, power generation, electrical distribution, lighting system, as well as necessary religious support equipment and supplies. Once erected, a containerized chapel can be operated by a minimum of one unit ministry team consisting of one chaplain and one chaplain assistant.

3-62. The containerized chapel provides for worship and religious education needs of Catholic, Jewish, Muslim, Protestant, and other faith groups.

SECTION VIII – SUMMARY

3-63. Quartermaster Soldiers plan, prepare, execute, and assess the sustainment warfighting sub-function: field services. Field services include the following: aerial delivery, clothing and light textile repair, food services, shower and laundry, mortuary affairs, and water purification. This sub-function is performed at the operational and tactical levels. When synchronized with the other sub-elements of the sustainment warfighting function and a commander's battle rhythm, field services enable operational reach and endurance across the spectrum of conflict. Field services are essential to enhancing Soldiers' quality of life while deployed.

Glossary

The glossary lists acronyms and terms with Army or joint definitions. Where Army and joint definitions differ, (Army) precedes the definition. Terms for which FM 4-40 is the proponent are marked with an asterisk (*). The proponent publication for other terms is listed in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

ABCS	Army Battle Command System
AIT	automated identification technology
AO	area of operations
APS	Army pre-positioned stocks
AR	Army regulation
ARFOR	Army forces
ASCC	Army Service component command
BCS3	Battle Command Sustainment Support System
BCT	brigade combat team
BSB	brigade support battalion
CAISI	combat service support automated information system interface
CONUS	continental United States
COP	common operational picture
CPOF	command post of the future
CSSB	combat sustainment support battalion
CSS VSAT	combat service support very small aperture terminal
CTASC	corps/theater automatic data processing service center
CUL	common-user logistics
DA	Department of the Army
DA PAM	Department of the Army pamphlet
DCGS-A	Distributed Common Ground System - Army
DCMA	Defense Contract Management Agency
DOD	Department of Defense
DLA	Defense Logistics Agency
DODAAC	Department of Defense activity address code
DS	direct support
ESC	expeditionary sustainment command
FBCB2	Force XXI Battle Command Brigade and Below
FM	field manual
FSC	forward support company
GCC	geographic combatant commander
GCSS	Global Combat Support System
GS	general support
ITV	in-transit visibility

JOA	joint operations area
JTF	joint task force
LIW	logistics information warehouse
LOGCAP	logistics civilian augmentation program
MA	mortuary affairs
MACP	mortuary affairs collection point
MCT	movement control team
METT-TC	mission, enemy, terrain and weather, troops and support available, time available, civil considerations
NICP	national inventory control point
PBO	property book officer
PBUSE	property book unit supply - enhanced
PE	personal effects
POL	petroleum, oils and lubricants
QM	quartermaster
RSOI	reception, staging, onward movement, integration
SAMS	Standard Army Maintenance System
SAMS-E	Standard Army Maintenance System - Enhanced
SARSS	Standard Army Retail Supply System
SDDC	Military Surface Deployment and Distribution Command
SPM	single port manager
SPOD	seaport of debarkation
SPOE	seaport of embarkation
SSA	supply support activity
STAMIS	standard Army management information system
TAV	total asset visibility
TMEP	theater mortuary evacuation point
TRANSCOM	Transportation Command
TSC	theater sustainment command
UGR	unitized group ration
UGR-A	unitized group ration - A
UGR – H&S	unitized group ration – heat and serve
ULLS-G	unit level logistics system - ground
U.S.	United States
USAMC	United States Army Materiel Command
USTRANSCOM	United States Transportation Command

SECTION II – TERMS

area of operations

(joint) An operational area defined by the joint force commander for land and maritime forces. Areas of operations do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. (JP 3-0)

Army Service component commander

The senior Army commander of an Army Service component command assigned to a unified command, who performs Unified Action Armed Forces assigned Service functions for the Army forces within the command, as well as three strategic and operational level roles: establishing linkages, conducting operations, and conducting support operations. The Army Service component commander functions in both the operational and Service chain of command.

***combat load**

The minimum mission-essential equipment and supplies as determined by the commander responsible for carrying out the mission, required for Soldiers to fight and survive immediate combat operations.

commander's critical information requirement

(joint) An information requirement identified by the commander as being critical to facilitating timely decision-making. The two key elements are friendly force information requirements and priority intelligence requirements. (JP 3-0)

commander's intent

(Army) A clear, concise statement of what the force must do and the conditions the force must establish with respect to the enemy, terrain, and civil considerations that represent the desired end state. (ADRP 3-0)

commander's visualization

The mental process of developing situational understanding, determining a desired end state, and envisioning the broad sequence of events by which the force will achieve that end state. (ADP 3-0)

common operational picture

(Army) A single display of relevant information within a commander's area of interest tailored to the user's requirements and based on common data and information shared by more than one command. (ADP 3-0)

distribution system

(joint) That complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military materiel between the point of receipt into the military system and the point of issue to using activities and units. (JP 1-02)

***direct exchange**

A supply method of issuing serviceable materiel in exchange for unserviceable materiel on an item-for-item basis.

in-transit visibility

(joint) 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. (JP 4-01.2)

joint force commander

(joint) A general term applied to a combatant commander, sub unified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. (JP 1)

joint operations area

(joint) An area of land, sea, and airspace defined by a geographic combatant commander or subordinate unified commander in which a joint force commander (normally a joint task force commander) conducts military operations to accomplish a specific mission. (JP 3-0)

line of communications

(joint) A route, either land, water, and/or air, that connects an operating military force with a base of operations and along which supplies and military forces move. (JP 1-02)

logistics

(joint) The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, those aspects of military operations which deal with: a. design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; b. movement, evacuation, and hospitalization of personnel; c. acquisition or construction, maintenance, operation, and disposition of facilities; and d. acquisition and furnishing of services. (JP 1-02)

mission command

The conduct of military operations through decentralized execution based upon mission orders. Successful mission command demands that subordinate leaders at all echelons exercise disciplined initiative, acting aggressively and independently to accomplish the mission within the commander's intent. (ADP 3-0 and ADRP 6-0)

mission orders

A technique for developing orders that emphasizes to subordinates the results to be attained, not how they are to achieve them. It provides maximum freedom of action in determining how to best accomplish the assigned missions. (ADP 3-0)

node

(joint) A location in a mobility system where a movement requirement is originated, processed for onward movement, or terminated. (JP 3-0)

situational awareness

Immediate knowledge of the conditions of the operation, constrained geographically and in time. (ADP 3-0)

situational understanding

product of applying analysis and judgment to relevant information to determine the relationship among the mission variables to facilitate decision making. (ADRP 3-0)

***supply point distribution**

A method of distributing supplies to the receiving unit at a supply point. The receiving unit then moves the supplies to its own area using its own transportation.

sustainment

(joint) The provision of logistics and personnel services required to maintain and prolong operations until successful mission accomplishment. (JP 3-0)

***unit distribution**

A method of distributing supplies by which the receiving unit is issued supplies in its own area, with transportation furnished by the issuing agency.

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FM 4-40 (FM 10-1)
22 October 2013

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:

A handwritten signature in black ink, appearing to read "Gerald B. O'Keefe", is positioned above the printed name.

GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army
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