Joint Publication 3-02

Amphibious Operations

4 January 2019

PREFACE

1. Scope

This publication provides fundamental principles and guidance for planning, conducting, and assessing amphibious operations.

2. Purpose

This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff (CJCS). It sets forth joint doctrine to govern the activities and performance of the Armed Forces of the United States in joint operations, and it provides considerations for military interaction with governmental and nongovernmental agencies, multinational forces, and other interorganizational partners. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders (JFCs), and prescribes joint doctrine for operations and training. It provides military guidance for use by the Armed Forces in preparing and executing their plans and orders. It is not the intent of this publication to restrict the authority of the JFC from organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of objectives.

3. Application

a. Joint doctrine established in this publication applies to the Joint Staff, commanders of combatant commands, subordinate unified commands, joint task forces, subordinate components of these commands, the Services, and combat support agencies.

b. This doctrine constitutes official advice concerning the enclosed subject matter; however, the judgment of the commander is paramount in all situations.

c. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence unless the CJCS, normally in coordination with the other members of the Joint Chiefs of Staff, has provided more current and specific guidance. Commanders of forces operating as part of a multinational (alliance or coalition) military command should follow multinational doctrine and procedures ratified by the United States. For doctrine and procedures not ratified by the United States, commanders should evaluate and follow the multinational command's doctrine and procedures, where applicable and consistent with US law, regulations, and doctrine.

For the Chairman of the Joint Chiefs of Staff:

DANIEL J. O'DONOHUE
Lieutenant General, USMC
Director, Joint Force Development

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SUMMARY OF CHANGES
REVISION OF JOINT PUBLICATION 3-02, 18 JULY 2014

- **Incorporates appropriate material from Joint Publication (JP) 3-04, *Joint Shipboard Helicopter Operations,* and JP 3-02.1, *Amphibious Embarkation and Debarkation.***
- **Enhances the discussion on operation assessment.**
- **Enhances the discussion of terminating an amphibious operation.**
- **Enhances the discussion of go/no go criteria.**
- **Enhances the discussion on command and control of operations ashore.**
- **Enhances the discussion on movement categories.**
- **Modifies the primary decision matrix.**
- **Adds discussion on multinational considerations and intelligence support to the amphibious force.**
- **Adds discussion on landing force support to defense of the amphibious task force.**
- **Adds discussion on concealing the force.**
- **Adds discussion on the three methods by which an amphibious ready group and Marine expeditionary unit can be employed.**
- **Adds discussion on combat logistics force planning.**
- **Adds discussion on composite warfare with an amphibious task force.**
- **Removes discussion on commander, amphibious force.**

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TABLE OF CONTENTS

EXECUTIVE SUMMARY
COMMANDER'S OVERVIEW

- **Describes an amphibious operation**
- **Describes the types of amphibious operations**
- **Discusses command and control of an amphibious operation**
- **Discusses the planning, embarkation, rehearsal, movement, and action phases**
- **Covers fires, protection, intelligence, communications, and sustainment support functions**

Overview of Amphibious Operations

An amphibious force is an amphibious task force and landing force together with other forces that are trained, organized, and equipped for amphibious operations.

An amphibious operation is a military operation launched from the sea by an amphibious force (AF) to conduct landing force (LF) operations within the littorals. The littorals include those land areas (and their adjacent sea and associated air space) that are predominantly susceptible to engagement and influence from the sea and may reach far inland.

Conduct of Amphibious Operations

The AF executes rapid, focused operations to accomplish the joint force commander's (JFC's) objectives. The commander, amphibious task force (CATF), and commander, landing force (CLF), plan and execute operations based on maneuver warfare philosophy. Operations should create freedom of action for the AF, while controlling the tempo better than the enemy can.

Applications

Amphibious operations use maneuver principles to employ ready-to-fight combat forces from the sea to the shore to achieve a position of advantage over the enemy. The ability to conduct amphibious operations from the sea, without the requirement for diplomatic clearance or host-nation support, provides the JFC with flexible and sustainable options.

Capabilities

AFs can alleviate unnecessary political and logistical burdens on host nations by operating from the sea base and reducing the footprint ashore. This adaptability and

versatility enables additional options for the JFC that do not limit the activities of the other components.

Types of Amphibious Operations

Amphibious raids are conducted as independent operations or in support of other operations.

An amphibious raid is an operation involving a swift incursion into or the temporary occupation of an objective to accomplish an assigned mission followed by a planned withdrawal. An amphibious raid may be conducted to temporarily seize an area to secure information, confuse an adversary or enemy, capture personnel or equipment, or to destroy a capability. Surprise is essential for the success of an amphibious raid and helps to offset the lack of fire support in preparing the objective area. Commanders should consider maximizing surprise through deception, stealth, speed, disguise, and ambiguity.

Amphibious demonstrations are a show of force intended to influence or deter an enemy's decision.

An amphibious demonstration's intent is to deceive the enemy, causing the enemy to select an unfavorable course of action. An amphibious demonstration may be executed to confuse the enemy as to time, place, or strength of the main effort. Amphibious demonstrations may be conducted to delude or confuse the enemy. The demonstration area should be near enough to the main effort to permit subsequent employment of the demonstration force if required. The demonstration area must be suitable for an actual landing so the threat of landing is plausible.

Amphibious assaults are launched from the sea by the amphibious force on a hostile or potentially hostile shore.

An amphibious assault requires the rapid buildup of combat power ashore, from an initial zero capability to full coordinated striking power as the attack progresses toward AF objectives. In the amphibious assault, combat power is progressively phased ashore. The assault is the most difficult type of amphibious operation and one of the most difficult of all military operations due to its complexity. Many of the principles and procedures of the amphibious assault apply to other types of amphibious operations.

Amphibious withdrawals are operations conducted to extract forces in ships or craft from a hostile or potentially hostile shore.

Amphibious withdrawals may be conducted under enemy pressure or under operational urgency in permissive, uncertain, or hostile environments to obtain forces needed elsewhere or to remove forces whose mission is completed. Withdrawal begins with establishment of defensive measures in the embarkation area and amphibious objective area (AOA) or operational area and ends when all elements of the force have been extracted and embarked on designated shipping.

Command and Control

The joint force commander may conduct operations through the Service component commanders or at lower echelons.

The organization of the AF should be sufficiently flexible to meet the planned phases of the operation and any development that may necessitate a change in plan. Sound organization provides for unity of effort through unity of command, centralized planning and direction, and decentralized execution. JFCs may decide to establish a functional component command to integrate planning; reduce JFC span of control; and significantly improve combat efficiency, information flow, unity of effort, weapon systems management, component interaction, or control over the scheme of maneuver.

Joint Force Commander

The command relationships established between the CATF and CLF and other designated commanders are important decisions. The AF commanders are coequal in planning matters. Planning decisions should be reached on a basis of common understanding of the mission; objectives; and tactics, techniques, and procedures and on a free exchange of information. Typically, a support relationship is established between the commanders and is based on the complementary rather than similar nature and capabilities of the amphibious task force (ATF) and LF.

Amphibious Force Organization

No standard organization is applicable to all situations that may be encountered in an amphibious operation. Depending on the amphibious operation, an ATF may vary in size and can be task-organized. Forward-deployed ATFs are normally organized into amphibious ready groups with three amphibious warfare ships (an amphibious assault ship [general purpose]/amphibious assault ship [multipurpose], amphibious transport dock, and dock landing ship).

Landing Force

The LF may be composed of United States Marine Corps (USMC) and United States Army (USA) forces, other US forces, and multinational forces (MNFs). Organizations that can be assigned as LF include the Marine expeditionary force, Marine expeditionary brigade, Marine expeditionary unit (MEU), and, in some cases, a special purpose Marine air-ground task force. If USA forces comprise part of the LF, they will be task-organized with appropriate combat and sustainment capabilities to support the LF.

Operational Areas

Amphibious operations normally require a three-dimensional geographic area, within which the AF's objective(s) is located. JFCs employ various maneuver and movement control and fire support coordination measures to define operational areas for

land and maritime forces and to facilitate effective joint operations. These measures include boundaries, phase lines, objectives, coordinating altitudes to deconflict air operations, air defense areas and zones, AOAs, submarine operating patrol areas, and minefields. An AOA is normally established by the JFC for amphibious operations, and air control procedures are identical to high-density airspace control zone procedures. The JFC must notify all commanders that an AOA or area of operations (AO) has been established, as their operational areas may be affected, as well as their ability to operate in the AOA.

Command and Control (C2) of Surface and Undersea Operations

The composite warfare organization enables offensive and defensive combat operations against multiple targets and threats simultaneously. The officer in tactical command (OTC) may implement a composite warfare organization. The OTC controls composite warfare commander (CWC) and subordinate warfare commander actions through command by negation. Command by negation acknowledges, that in many aspects of often distributed and dispersed maritime warfare, it is necessary to pre-plan the actions of a force to an assessed threat and delegate some warfare functions to subordinate commanders.

C2 of Surface Ship-to-Shore Movement

The CATF, in close coordination with the CLF, prepares the overall ship-to-shore movement and landing plans. During the execution of the amphibious operation, the CATF is overall responsible for ship-to-shore movement but will coordinate with the CLF to adjust for changing situations. The CATF and transport group commanders designate control ships and control officers, as appropriate. The organization of the Navy control group is based on the arrangement and number of landing beaches used by the AF and is specifically designed to support the LF's organization for landing.

C2 of Air Operations

Joint air operations in support of the AF are performed with air capabilities and forces made available by components in support of the JFC's or AF's objectives. The JFC synchronizes and integrates the actions of assigned, attached, and supporting capabilities and forces in time, space, and purpose by designating a joint force air component commander, area air defense commander (AADC), and airspace control authority for the joint operations area (JOA). Air operations conducted within the AOA are controlled by the ATF and/or LF air staff as designated. When the JFC establishes an AOA within the JOA, the supported commander is responsible for all actions within the AOA. Any joint air operations that support operations in the AOA or would have an impact on operations in the AOA should be controlled by, or coordinated with, the

CATF. Aircraft units employed in the air ship-to-shore movement are subordinate elements of the LF. The CATF coordinates and controls air operations through the Navy tactical air control center. The Marine Corps tactical air command center, when established ashore, provides the facilities for the aviation combat element commander and staff to conduct air operations.

Defensive Counterair

The AADC bears overall responsibility for air defense activities of the joint force, to include defense from missile threats. The AADC may designate subordinate regional air defense commanders (RADCs) for specific geographic regions to accomplish the joint force mission. An RADC is normally established within the ATF organization and is responsible for the airspace allocated for amphibious operations, including, but not limited to, the AOA. The CATF usually assigns an air and missile defense commander (AMDC), normally located on the most capable air defense platform, to carry out air and missile defense operations. The AMDC may be assigned as the RADC by the CWC.

C2 of Operations Ashore

The CLF is responsible for the overall execution of LF operations ashore. Command and control (C2) systems and procedures should be flexible enough to provide support to the LF while afloat, while ashore in an austere expeditionary environment, and during transition from ship-to-shore. Communications connectivity and C2 interoperability may be required within and between the JTF headquarters, the USMC or USA component commanders, and any designated functional component commanders. Connectivity and interoperability are required for multinational operations with allied and coalition forces for C2. C2 may remain afloat and not transfer ashore based on the type and scope of the amphibious operation. Forward-deployed MEUs conducting small-scale operations routinely exercise C2 afloat.

Planning Phase

Tenets of Amphibious Planning

Amphibious planning requires concurrent, parallel, and detailed planning by all participating forces. The tenets of successful amphibious planning are commanders' involvement and guidance and unity of effort. Commanders' guidance and intent are central to planning and must be translated into a design for action by subordinates.

Amphibious Force Decisions

The JFC order will contain guidance for the development of the plan prepared by the AF commanders. This guidance may include the amphibious mission, the purpose of the mission, the general location, and typically a target date for execution.

Based on the orders passed from the JFC through the chain of command to the AF, the AF commanders in turn make other primary decisions. In the case of mutual decisions, both the CATF and CLF must concur or the decision is referred to the common superior or establishing authority for resolution. Supporting decisions are those used by the CATF/CLF to refine the plan, which include methods of entry, selecting the landing area, selecting landing beaches, determining the sea areas and echelon plan, LF objectives, and landing and drop zones. Other decisions include determining go/no-go and abort criteria, forward arming and refueling points, and transition. The decision to conduct seabasing operations depends on the tactical situation and the scope and intensity of the assigned mission.

Operation Assessment

Integrating assessments into the planning cycle helps the commander ensure the operational approach remains feasible and acceptable in the context of higher policy, guidance, and orders. The CATF's and CLF's requirements for decision making should focus the assessment plan and activity.

Movement and Areas

The CATF prepares the movement plan. In operations involving several attack groups, the CATF usually prepares a general movement plan, which includes coordination measures as necessary. Subordinate force and group commanders will prepare their own detailed movement plans. Routes and route points should be named to facilitate reference. Small-scale charts, which show sea routes and route points, are prepared and included in the operation plans (OPLANs) and operation orders of appropriate ATF echelons. The CATF, in consultation with the CLF, may decide to use staging areas while en route to the operational area. The AF may stage at one or more intervening ports for refueling, logistic support, emergency repairs, or final rehearsals. The ability to conduct littoral maneuver provides an advantage for the AF by imposing a continuous coastal threat on the enemy that may cause dispersal of enemy forces, potentially dissipating enemy defenses. Littoral maneuver enables AFs to operate across a wider geographic area in a more decentralized manner.

Ship to Shore Movement

The plan for ship-to-shore movement to land troops, equipment, and supplies at the prescribed times, places, and in the formation required to support the LF scheme of maneuver is developed by the CATF and CLF. Displacement and non-displacement landing craft are used to land troops, equipment, and supplies in amphibious operations by surface ship-to-shore movement. Aircraft employed in ship-to-shore movement are organic to the LF, and their employment is primarily determined by the CLF.

Landing Plan

The landing plan is prepared after the final allocation of means has been made. It represents the integrated sum of detailed plans for waterborne and airborne ship-to-shore movement prepared by corresponding ATF and LF commands at all levels. The landing plan is composed of certain specific documents that present, in detail, the numbers of landing craft, helicopters, and surface craft available for use and the exact personnel and equipment that will be loaded on each, along with embarkation and landing times.

Other Planning Considerations

When developing the overall plan for an amphibious operation, other planning considerations, such as those associated with supporting functions, should be considered. They are the enablers that support execution, such as fire support, protection, intelligence, communications, and logistics/sustainment. Additional planning considerations include operations in chemical, biological, radiological, and nuclear environments; the electromagnetic spectrum operations; and cyberspace operations.

Embarkation, Rehearsal, and Movement

Embarkation Phase

The embarkation phase is the period during which the forces, with their equipment and supplies, are embarked in assigned ships. The organization for embarkation is a temporary task organization that accounts for each element of the AF and other forces that may originate from several locations and require both sealift and airlift support. It conforms to the circumstances of the deployment and the requirements of the expected tactical situation. The development of detailed and comprehensive embarkation and staging plans is a mutual responsibility of the CATF, CLF, naval forces, and external supporting agencies.

Rehearsal Phase

Rehearsal is the period during which the prospective operation is practiced. The types of rehearsals are based on the individual needs of the ATF and LF. Rehearsals are not unit-level training; rather, they are conducted to exercise the ATF and LF ability to execute the OPLAN for the specific mission assigned. The rehearsal phase may be conducted concurrently with other phases of the amphibious operation but most often is associated with the movement phase. Rehearsal plans require execution of the various tasks and functions paralleling those required during the operation.

Movement Phase

In amphibious operations, the movement plan is the naval plan providing for the movement of the ATF to the objective area. It includes information and instructions concerning departure

of ships from embarkation points, the passage at sea, and the approach to and arrival in assigned positions in the objective area. AF assets are organized into movement groups for embarkation and deployment to support the amphibious operation based on the landing plan.

Action Phase

Preparation and Shaping of the Operational Environment

Prior to the execution of the action phase of an amphibious operation, the JFC seeks to shape the operational environment. Shaping operations include supporting and prelanding operations. Planners consider how to conceal the AF and their intentions throughout all phases of the operation. Plans include actions to hide the force, confuse the enemy, and reduce the enemy's sensors effectiveness, while embarking and rehearsing and during movement and the action phases. The amphibious advance force, in concert with supporting operations, prepares the AOA or AO. Prelanding operations take place between the commencement of the action phase and the ship-to-shore movement.

Planning and Execution

The commencement of landing craft and aircraft loading operations, and the timing of other ship-to-shore movement preparations, are dependent on the designated H-hour and L-hour. Whether using landing craft, amphibious vehicles, or helicopters and tiltrotor aircraft, the CATF—in conjunction with the CLF—develops and adheres to a strict time schedule based on H-hour. Scheduled waves are launched at predetermined times and places of landing in the initial stages of the assault. They include both waterborne and airborne waves. On-call waves are LF units, equipment, and supplies for which an urgent need ashore is anticipated but whose time and place of landing by surface or air cannot be accurately predicted. Naval surface fire support (NSFS) is used to destroy or neutralize enemy defense installations that might interfere with the approach and final deployment of the AF and to assist in isolation of the landing area. NSFS is used to support underwater demolition and mine countermeasures (MCM) operations. Subsidiary landings should be planned and executed by commanders with the same precision as the main landing.

Fire Support

Properly planned and executed supporting fires that create lethal and/or nonlethal effects are critical

Properly planned and executed supporting fires that create lethal and/or nonlethal effects are critical to the success of an amphibious operation. Fire support planning and coordination in amphibious operations are continuous processes seeking timely and appropriate application of force to achieve the

objectives within the operational area. Fires in support of amphibious operations are the cooperative product of three processes: target acquisition, C2, and attack resources.

Planning and Execution

The purpose of fire support planning is to optimize the employment of fire support to achieve the supported commander's intent by shaping the operational area and providing support to maneuver forces. The CATF prepares the overall NSFS plan based on the CLF and ATF requirements. The plan allocates gunfire support ships and facilities. Fire support coordination in multinational operations demands special arrangements with MNFs and local authorities. To maximize the fires of the MNF and to minimize the possibility of friendly fire, the CATF and staff should be familiar with each nation's capabilities and limitations in munitions, digital capability, and training to ensure they develop good fire support coordination throughout the MNF.

Protection

Protective Measures

Protection of the AF is essential for all amphibious operations but especially during ship-to-shore movement. The LF must arrive in the landing area without critical reduction of its combat power. Measures necessary for protection of the LF elements in transit from the sea include all measures taken by any task force operating at sea. This includes operations to locate, classify, and track surface vessels, submarines, and aircraft and, if required, applying force against them.

Mine Countermeasures and Obstacle Clearance and Avoidance

Elements of mine warfare which can be used in support of amphibious operations include mining (offensive, defensive, and protective) and MCM (offensive, including strategic strike against mine stocks or minelayers, and defensive, including avoidance of mined waters, operational deception, and active use of MCM platforms to hunt or sweep for active enemy mines). **Enemies often employ integrated antilanding capabilities that have incorporated the use of land, maritime, air, and, in some cases, space assets.** These capabilities involve integration of reconnaissance, long-range interdiction by air and sea forces, and a combined/arms ground force at the beach. In most cases, enemies will employ mines as an economy of force defensive measure.

Defense of the Amphibious Task Force

Defensive counterair includes all measures designed to detect, identify, intercept, and destroy or negate enemy air and missile forces attempting to attack or penetrate through friendly airspace. These operations employ both active and passive measures to protect US or MNFs assets and interests. To assure access for the AF, surface warfare-capable forces will

be required to operate in the open ocean, the approaches to the littorals, and the more difficult littoral environment. Although often viewed as a Navy-only mission, the joint force maritime component commander may utilize a variety of joint forces (air, land, maritime, space, and special operations) to facilitate or conduct antisubmarime warfare in support of amphibious operations. Depending on the situation, the CLF may be called upon to help defend the ATF before, during, or even after the landing. The AF is especially vulnerable when operating in potential confined waters within the AOA or AO and while transitioning straits.

Intelligence and Communications

Intelligence

The JFC should consider the size and duration of the operation and the organic intelligence capabilities of the AF when establishing either a joint intelligence support element or an operational-level joint intelligence operations center to support the AF. The joint intelligence support element or joint intelligence operations center will be the central node in securing theater- and national-level intelligence support for the AF and provide direct intelligence support to AF components. Every AF deploys with US Navy and USMC intelligence staff that should plan to conduct intelligence operations and share intelligence products with multinational partners. These staffs must coordinate with the geographic combatant command foreign disclosure officer as early as possible to determine what classified military information may be shared with participating foreign governments and international organizations.

Communications Support

Communications system architecture should provide strategic and tactical connectivity to a variety of tailored AFs, multinational partners, and US Government departments and agencies, as well as other commanders and participants in the amphibious operation. In austere tactical environments, such as may be seen in amphibious raids, the communications network may not be robust and may be severely degraded when disturbed. The AF should plan for, provide C2 for, and support all functional areas (e.g., fires, aviation, intelligence, combat service support [CSS]) afloat and ashore. MNFs will likely have differences in their communications system, classification limitations, language, terminology, doctrine, operating standards, capacity to share information, and willingness to share information, which can cause confusion and interoperability problems in the AOA.

Sustainment

The commander, amphibious task force and the commander, landing force have co-responsibility for determining overall sustainment requirements for the amphibious force.

The requirement for afloat forces to provide support to the LF during the period in which the LF logistic system is primarily sea-based has a significant influence on logistic planning for an amphibious operation. The AF logistic systems must be responsive, simple, flexible, economical, attainable, sustainable, and survivable.

Planning and Execution

Logistics planning should include considerations for initial supply and sustained operations. Wherever possible, sustainment planning should include direct ship-to-user delivery. From the CSS standpoint, the ship-to-shore movement is divided into two time periods: selective unloading and general unloading. The selective unloading period is responsive to the requirements of LF units. General unloading is undertaken when sufficient troops and supplies have been landed to sustain the momentum of the attack and when areas are able to handle the incoming volume of supplies.

CONCLUSION

This publication provides fundamental principles and guidance for planning, conducting, and assessing amphibious operations.

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CHAPTER I
OVERVIEW OF AMPHIBIOUS OPERATIONS

"A landing on a foreign coast in the face of hostile troops has always been one of the most difficult operations of war."

Captain Sir Basil H. Liddell Hart (1895-1970)

1. General

a. An amphibious operation is a military operation launched from the sea by an amphibious force (AF) to conduct landing force (LF) operations within the littorals. The littorals include those land areas (and their adjacent sea and associated air space) that are predominantly susceptible to engagement and influence from the sea and may reach far inland. Amphibious operations require the unique ability to operate across air, land, and sea. Amphibious operations require integrated command and control (C2) to achieve unity of effort, increased speed of action, and coordinated application of sea control and power projection capabilities. AFs have and continue to conduct operations as a part of larger military operations in permissive, uncertain, and hostile environments. The term *amphibious operation* has often stirred visions of wave upon wave of amphibious assault vehicles (AAVs) and landing craft approaching a well-defended beach in straight lines, such as those well-known amphibious assaults that were necessary in World War II. While those amphibious assaults are a matter of historical record, they are not the only, or even the most likely, form of amphibious operations. Current AFs are more operationally maneuverable with the ability to operate from over the horizon (OTH) and, in some cases, proceed directly to the objective by both air and surface means.

b. An AF is an amphibious task force (ATF) and LF together with other forces that are trained, organized, and equipped for amphibious operations. An ATF is a Navy task organization formed to conduct amphibious operations. This may include various combinations of United States Navy (USN), Military Sealift Command (MSC), and Maritime Administration assets. An LF is a United States Marine Corps (USMC) or United States Army (USA) task organization formed to conduct amphibious operations. An AF is a self-deploying, self-sustaining, combined arms team capable of conducting simultaneous, disparate, geographically dispersed, or concentrated operations.

c. Effective C2 of amphibious operations is complicated by the nature of the operational environment, the integration of disparate forces with different but supporting tasks, and the coordination required to optimize supporting forces. AFs and amphibious operations, no matter their makeup or application, are complex and inherently joint or multi-Service.

d. The ability to operate within the maritime domain, conduct operations from OTH, dynamically size and organize the force, and limit reliance on infrastructure ashore enables amphibious operations to be conducted during any phase of a larger joint operation (such as a joint forcible entry) or campaign.

e. Sustainment of AF, especially the LF during the earliest stages of execution, is complex and presents unique planning considerations for commanders and their staffs.

f. Amphibious operations are generally categorized into five types: raid, demonstration, assault, withdrawal, and AF support to crisis response and other operations.

2. Conduct of Amphibious Operations

a. The AF executes rapid, focused operations to accomplish the joint force commander's (JFC's) objectives. Regardless of the type of amphibious operation, the commander, amphibious task force (CATF), and commander, landing force (CLF), plan and execute operations based on maneuver warfare philosophy and the following general concepts:

b. All actions focus on achieving the commander's objectives. The concept of operations (CONOPS) guides actions to exploit decisive points and/or enemy-critical vulnerabilities to defeat the enemy's centers of gravity (COGs).

c. The maritime domain is used as maneuver space. Operations should create freedom of action for the AF, while controlling the tempo better than the enemy can. The CATF and CLF should exploit advances in areas such as operations in the information environment (to include cyberspace, electronic warfare [EW], military information support operations [MISO], operations security [OPSEC], and military deception [MILDEC]), precision targeting systems, and waterborne and airborne transportation craft that enable the CATF to conduct an assault for the introduction of the AF at the time that supports the JFC's CONOPS. Naval maneuver can be conducted from a distance long before closing the shoreline, as the sea offers many avenues of approach. It involves fighting on, above, under, and from the sea, including striking targets on a hostile or potentially hostile shore while conducting amphibious operations. It may also include conducting deep strikes ashore using advanced tactical aircraft or other offensive technologies to shape the operational environment. Collectively, naval maneuver capabilities provide the ability to conduct operational maneuver from the sea.

d. A key to successful AF operations is the ability to maneuver across the littorals to overcome challenges in a contested environment, gain entry, and project power ashore as necessary. Reduced signature of forces, flexibility of action, responsive fires, and control of dispersed landing sites are essential to pit AF strengths against enemy weaknesses.

e. The preferred tactic for AFs operating against coastal defenses is to avoid or bypass enemy strengths and to exploit enemy weaknesses and gaps in these defenses. Both require not only the ability to gain timely information but also the capability to process and disseminate accurate and useful intelligence to commanders at all levels enabling informed decision making. This also requires strong OPSEC and the flexibility to exercise initiative to exploit opportunities and overcome or mitigate challenges. If unable to bypass the enemy strengths, the AF will be required to neutralize them to conduct operations in and through the littorals.

f. The complexity of amphibious operations and the vulnerability of the AF as it builds combat power ashore require the full integration of organic assets, as well as those of other joint and multinational forces. Clearly defining the roles, relationships, requirements, and standards of all forces involved will promote coordinated support and unity of effort.

3. Applications

a. Amphibious operations use maneuver principles to employ ready-to-fight combat forces from the sea to the shore to achieve a position of advantage over the enemy. During combat operations, maneuver, in conjunction with organic and supporting fires, is essential to gaining access where the enemy least expects it. It provides a position of advantage to destroy or seriously disrupt the enemy's cohesion through a variety of rapid, focused, and unexpected actions that create a turbulent and rapidly deteriorating situation with which the enemy cannot cope. In noncombat situations, the AF projects appropriate forces and resources ashore to provide the most timely and effective support. Certain amphibious operations (e.g., assaults and raids) seek to exploit the element of surprise and capitalize on enemy weakness by projecting and applying combat power precisely at the most advantageous location and time. Other types of amphibious operations may be conducted more deliberately with an intent of making intended audiences aware of impending actions (e.g., demonstrations, crisis response, and other operations).

b. The ability to conduct amphibious operations from the sea, without the requirement for diplomatic clearance or host-nation support, provides the JFC with flexible and sustainable options. Additionally, the ability to conduct OTH operations enhances security, aids force protection efforts, provides additional maneuver space, and improves the ability to achieve surprise. Conducted alone, or in conjunction with other military operations, amphibious operations can be designed to support a number of JFC objectives as characterized by the five types of amphibious operations.

4. Types of Amphibious Operations

a. **Amphibious Raid.** An amphibious raid is the swift incursion into, or temporary occupation of, an objective followed by a planned withdrawal. Amphibious raids may be conducted to temporarily seize an area to secure information, confuse an adversary or enemy, capture personnel or equipment, or destroy a capability. They may also be executed in conjunction with a larger operation to defeat specific enemy COGs.

b. **Amphibious Demonstration.** An amphibious demonstration is conducted for the purpose of deceiving the enemy by a show of force with the expectation of deluding the enemy into following an unfavorable course of action (COA). For the JFC, an amphibious demonstration may serve as a supporting operation in a larger operation or campaign to deny the use of areas or facilities to the enemy or to fix enemy forces and attention in or on a specific area. It can also be used to demonstrate the capability and resolve of the joint or combined force, thus reinforcing diplomatic efforts to ease tensions and maintain regional security. Given the proliferation of antiship cruise and ballistic missiles, which may be employed by the enemy, an amphibious demonstration is both challenging and

potentially carries extreme risk to the AF. The CATF and CLF must ensure the demonstration is sufficiently believable to deceive the enemy force.

Refer to Joint Publication (JP) 3-13.4, Military Deception*, for more information.*

c. **Amphibious Assault.** An amphibious assault is launched from the sea by an AF, embarked in ships or crafts, to land the LF and establish it on a hostile or potentially hostile shore. The salient requirement of an amphibious assault is the necessity for rapid build-up of combat power ashore to full coordinated striking power as the attack progresses toward AF objectives. The organic capabilities of AFs, including air and fire support, logistics, and mobility, enable them to gain access to an area by forcible entry. An amphibious assault may be designed to comprise the initial phase of a campaign or major operation where the objective is to seize and establish a military lodgment (e.g., ports, airfields, and advance bases), to support the introduction of follow-on forces, to occur simultaneously with other operations (e.g., Army airborne operations), or to deny freedom of movement by the enemy.

For more information on other types of forcible entry operations, refer to JP 3-18, Joint Forcible Entry Operations.

d. **Amphibious Withdrawal.** An amphibious withdrawal is the extraction of forces by sea in ships or craft from a hostile or potentially hostile shore. The withdrawing force may or may not be part of the AF and may not even be familiar with amphibious operations. Conducting an amphibious withdrawal may cause the temporary debarkation or cross-decking of embarked LF elements.

e. **AF Support to Crisis Response and Other Operations.** AFs routinely conduct amphibious operations in response to crises and in support to other operations such as security cooperation, foreign humanitarian assistance (FHA) (to include disaster relief), noncombatant evacuation operations (NEOs), peace operations, sea control, or recovery operations. These operations contribute to conflict prevention and crisis mitigation.

5. Characteristics of Amphibious Operations

a. **Integration of the ATF and LF.** The key characteristic of an amphibious operation is the close coordination and cooperation between the ATF and LF. Shared planning responsibilities and the reliance of both forces on each other during execution are hallmarks of amphibious operations. Integration of forces required to execute operations, while simultaneously being tasked to conduct separate and distinct tasks while supporting other components' operations, are common in amphibious operations and require trust between the commanders and their staffs. History shows that commonly shared experiences, developed during predeployment training, preparation, and rehearsals, can enhance the chances of success.

b. **Gaining and Maintaining Access.** An amphibious operation requires the AF to gain and maintain access for entry into the operational area. This access is critical to the success of an amphibious operation. Access may be granted by a nation as a result of previous diplomatic actions. In other cases, access may need to be gained by shaping the

operational area through supporting operations. The JFC may need to employ maritime, air, land, and special operations forces; cyberspace forces; and space assets to shape the operational environment. The JFC and joint force maritime component commander (JFMCC) should shape the amphibious objective area (AOA) or area of operations (AO) with maritime and other joint forces prior to the commencement of the amphibious operation to establish the level of maritime and air superiority necessary for the amphibious operation to occur. The JFC or JFMCC may employ a support force, which is a temporary organization comprised of initial and crisis response forces and special operations forces (SOF) in the AO, which assists in preparing the AO for amphibious operations by conducting operations. These operations could include surveillance and reconnaissance, beach studies, MILDEC, seizure of supporting positions, mine countermeasures (MCM), preliminary bombardment, underwater demolitions, and air interdiction. Integration of other Service components and SOF will enable complementary supporting operations. An AF, in conjunction with other joint assets, should have the capacity to continuously support forces ashore during all phases of an amphibious operation.

c. **AFs are task-organized based on the mission.** AFs routinely deploy with similar task organizations and can be quickly reinforced or augmented with other assets. No standard organization is applicable to all situations that may be encountered in an amphibious operation. The C2 capabilities of the ATF and LF facilitate the accomplishment of multiple and diverse missions and the integration of joint and multinational forces.

d. **Unity of Effort.** The inherent complexity of amphibious operations normally requires the JFC's personal attention and timely decisions for numerous planning, integration, and support activities to achieve unity of effort. Regardless of command relationships, both within the AF (such as between CATF and CLF) and external to the AF (between the commander and higher, supporting, and adjacent commanders), all commanders require shared intelligence, a shared understanding of the operational environment, a common operational picture, understanding of the JFC's intent, and open communications between the staffs. The effects of modern weapons and sensors can extend hundreds of miles both seaward and landward, further highlighting the need for closely integrated application of capabilities throughout the operational area. The JFMCC should integrate all of the naval assets such as strike warfare, undersea warfare, and surface warfare (SUW). The JFC coordinates the joint capabilities, to include SOF required to support an amphibious operation. In addition, commanders of theater special operations commands and Navy and Marine Corps component commanders should also establish complementary relationships that support amphibious operations.

6. Capabilities

a. AFs can be tailored and scaled to support a specific mission or situation and repositioned to respond to a changing situation or modification of the CONOPS. AFs can alleviate unnecessary political and logistical burdens on host nations by operating from the sea base and reducing the footprint ashore. This adaptability and versatility enables additional options for the JFC that do not limit the activities of the other components.

b. AFs operate in a wide variety of terrain; weather conditions; and environments, to include chemical, biological, radiological, and nuclear (CBRN) environments.

c. Routinely, forward-deployed AFs provide the JFC with a force proficient in time-sensitive planning and capable of rapid response in crisis situations. They can perform a wide range of mission-essential tasks to facilitate the accomplishment of the joint force mission.

7. Initiating an Amphibious Operation

a. Amphibious operations commence with the initiating directive, issued by the commander with establishing authority, to the AF commanders to conduct military operations. Also, the combatant commander (CCDR) may delegate overall responsibility for the operation to the subordinate unified commander, Service component commander, or JFC.

b. The initiating directive may come in the form of a warning order, an alert order, a planning order, or an operation order (OPORD). The complete information required to conduct an amphibious operation may come from a combination of these orders (e.g., a warning order followed by an alert order or OPORD). The initiating directive normally provides the following information:

(1) The establishing authority's mission, intent, and CONOPS.

(2) Designation of required commanders, establishment of their command relationships, and provision of special instructions (SPINS) as required to support the AF organization and mission. SPINS may include an establishing directive when a support relationship is established among designated commanders of the AF.

(3) Designation of the AF's assigned, attached, and supporting forces.

(4) Assignment of operational areas as appropriate.

(5) Assignment of tasks.

(6) Assignment of responsibility and provision of necessary coordinating instructions for the conduct of supporting operations.

(7) Target dates for execution of the operation.

(8) Critical characteristics of the physical, military, or civil condition (e.g., location of toxic industrial material, storage sites for weapons of mass destruction [WMD], critical items of the civil infrastructure).

(9) Additional coordinating instructions, as required.

8. Force Closure and Aggregation

a. The JFC should consider both the time it will take to close the force and how the AF will be aggregated with other forward-deployed or surge forces, to support operations. Forward-deployed AFs routinely conduct relatively small-scale amphibious operations to enhance regional security and contribute to conflict prevention or crisis mitigation. Larger-scale amphibious operations may require additional forces that are aggregated from other forward-deployed AFs in the same theater, in adjacent theaters, or surging AFs from the continental US. While a forward-deployed AF is manned, organized, and equipped to meet stated geographic combatant commander (GCC) requirements and the anticipated operational environment (e.g., arctic, jungle), they are capable of various crisis response operations and specified operation plan (OPLAN) requirements. A forward-deployed AF accommodates the most likely missions to be encountered during deployment; surged AFs typically conduct planning and embarkation for a specific mission and may include compensating for any capability shortfalls in the forward-deployed AFs.

b. An amphibious ready group (ARG) with an embarked Marine expeditionary unit (MEU) are forward-deployed, crisis response forces rotationally allocated in support of CCDR's requirements validated by the Joint Staff. The three methods by which an ARG and MEU can be employed are:

(1) **Aggregated.** The most common form where the AF is employed under a single GCC who maintains operational control (OPCON) and tactical control (TACON) of the ARG and MEU. "Split" is a subset of aggregated, where the ARG and MEU remain employed within a single GCC's area of responsibility (AOR), but the units are separated by time, distance, or task while operating beyond the reach of organic tiltrotor aircraft or landing craft. Aggregated provides unity of command and is the preferred employment construct.

(2) **Disaggregated.** This construct is driven by emergent requirements, wherein the ARG and MEU are divided into parts to support multiple GCCs. The ARG and MEU elements operate within the distinct OPCON/TACON chains of the respective GCC. Disaggregation comes with a corresponding degradation of ARG and MEU combat power, operational readiness, training, and maintenance and, as a result, is the least preferred employment construct.

(3) **Distributed.** The ARG and MEU is partitioned for emergent requirements for multiple GCCs; however, the original GCC to whom it was allocated retains OPCON while the other exercises TACON of elements that are distributed for a specific mission or duration mission. The ARG and MEU communication and computers systems are critical for supporting distributed operations. The GCC that has OPCON may request re-aggregation at any time, and the ARG and MEU commanders cannot make changes to capabilities allocated OPCON or TACON without approval. Distributed is the preferred employment construct to support multiple GCCs as the ARG and MEU is able to sustain its elements, facilitate planning, and conduct military engagement and joint/combined training across AOR boundaries and is supported throughout operations.

9. Phases of an Amphibious Operation

a. Amphibious operations generally follow distinct phases, though the sequence may vary. The phases of an amphibious operation are planning, embarkation, rehearsal, movement, and action (PERMA) and are summarized in Figure I-1.

Phases of an Amphibious Operation

Planning

The planning phase normally denotes the period extending from the issuance of an initiating directive that triggers planning for a specific operation and ends with the embarkation of landing forces. However, planning is continuous throughout the operation. Although planning never ends, it is useful to distinguish between the planning phase and subsequent phases because of the change that may occur in the relationship between amphibious force commanders at the time the planning phase terminates and the next phase begins.

Embarkation

The embarkation phase is the period during which the landing force with its equipment and supplies, embark in assigned shipping. The landing plan and the scheme of maneuver ashore will influence which staffs and units are embarked on which ships, the number and type of landing craft that will be embarked, and how the units will be phased ashore. The organization for embarkation needs to provide for flexibility to support changes to the original plan. The extent to which changes in the landing plan can be accomplished may depend on the ability to reconfigure embarked forces.

Rehearsal

The rehearsal phase is the period during which the prospective operation is rehearsed to:

- Test the adequacy of plans, timing of detailed operations, and combat readiness of participating forces.
- Ensure all echelons are familiar with plans.
- Test communications and information systems.
- Provide an opportunity to reconfigure embarked forces and equipment.

Rehearsal may consist of an actual landing or may be conducted as a command post exercise.

Movement

The movement phase is the period during which various elements of the amphibious force move from points of embarkation or from a forward-deployed position to the operational area. This move may be via rehearsal, staging, or rendezvous areas. The movement phase is completed when the various elements of the amphibious force arrive at their assigned positions in the operational area.

Action

The action phase is the period from the arrival of the amphibious force in the operational area, through the accomplishment of the mission and the termination of the amphibious operation.

Figure I-1. Phases of an Amphibious Operation

b. While planning occurs throughout the entire operation, it normally dominates staff actions prior to embarkation. Successive phases bear the title of the dominant activity taking place within the phase and are covered in more detail later.

c. When AFs are forward-deployed, or when subsequent tasks are assigned upon completion of the original mission, the sequence of phases may differ. This sequence accounts for the new mission, reconstitution of forces, and initial cross-decking of staff components or forces to support planning, preparation, and future actions. This sequence flows from embarkation, through planning, rehearsal, and movement, to the operational area and ends with action. The planning and execution of an amphibious operations typically occurs against the backdrop of the concurrent major activities of a major operation or campaign as discussed in JP 3-0, *Joint Operations,* and JP 5-0*, Joint Planning.*

10. Terminating an Amphibious Operation

a. The criteria for how and when to terminate amphibious operations are discussed during operational design. The termination of an amphibious operation is predicated on either the accomplishment of the mission set out in the initiating directive or a change in the situation that renders mission objectives no longer achievable or operationally necessary. When the CATF and CLF are satisfied that the conditions for the accomplishment of the mission have been met (normally predetermined or agreed upon), they will propose termination of the operation to the establishing authority who issued the initiating directive. Upon termination, the LF may re-embark to reconstitute the AF for potential employment elsewhere, remain ashore as the land component commander, or be attached to the joint force land component commander (JFLCC). The establishing authority will terminate the amphibious operation and disestablish the AOA.

(1) If the LF remains ashore to conduct protracted operations, the transfer of combat support and combat service support (CSS) functions and control agencies from the CATF to CLF must be completed prior to execution of transfer of authority to enable the CLF to function fully as the land component commander.

(2) Within the parameters of the joint campaign, responsibility for control of the area previously covered by the AOA may have to be handed over to the JFC or another component commander.

(3) The establishing authority provides instructions for command arrangements and organization after the termination of the amphibious operation. An aspect to consider is any requirement for former ATF elements to remain in the littoral waters of the former AOA to support the joint force operating ashore, casualty regulating/evacuation operations, aviation support operations, and other supporting operations.

b. Detailed planning should be conducted between the CATF's and CLF's staffs to identify when the conditions for termination have been met. Conditions might include:

(1) AF objectives are achieved.

(2) Sufficient tactical and supporting forces have been established ashore to ensure the continuous landing of troops and material required for subsequent operations.

(3) Command, communications, supporting arms coordination, and air control facilities have been established ashore.

(4) The CATF and CLF are in agreement, and the CLF is ready to assume full responsibility for subsequent operations.

c. Prior to the termination of an amphibious operation, and as conditions warrant, control and coordination agencies are established ashore under the CLF. The authority to control and coordinate various logistic functions and supporting arms is transferred to the CLF—or for airspace control and the control of air operations in the AOA to the airspace control authority (ACA). This transfer occurs in a phased evolution, where the levels of responsibility that are transferred will be governed by the ability of the CLF to execute the control and coordination; this depends, among other things, on the availability of adequate communications architecture. The primary control and coordination functions to be transferred are:

(1) Fire support control and coordination (e.g., artillery, naval gunfire, and tactical air support).

(2) EW and MISO.

(3) Counterair operations/air defense (including airspace management).

d. When conditions for the termination of an amphibious operation are satisfied, the CATF and CLF will recommend to the common superior a specific date/time for termination of the amphibious operation and, if applicable, for concurrent transfer of OPCON (or otherwise) of the LF to the appropriate commander ashore. The common superior may, through the JFC, in consultation with other commanders in the area, direct termination of the amphibious operation, thus disestablishing the AF and AOA and arrange/effect the transfer of OPCON.

e. The LF may be required to reconstitute with the AF, after transfer of OPCON to a commander ashore, for example to re-embark for further amphibious operations.

CHAPTER II
TYPES OF AMPHIBIOUS OPERATIONS

"The amphibious landing is the most powerful tool we have."

General Douglas MacArthur
Planning Conference for Inchon Landing, 23 August 1950

1. Overview

The five types of amphibious operations are: amphibious raid, amphibious demonstration, amphibious assault, amphibious withdrawal, and AF support to crisis response and other operations. The types of amphibious operations apply to a variety of missions across the range of military operations. While later chapters provide basic considerations for amphibious operations with respect to PERMA, this chapter provides additional planning considerations and specific execution information for each of the five types of amphibious operations.

SECTION A. AMPHIBIOUS RAID

2. General

a. An amphibious raid is an operation involving a swift incursion into or the temporary occupation of an objective to accomplish an assigned mission followed by a planned withdrawal. An amphibious raid may be conducted to temporarily seize an area to secure information, confuse an adversary or enemy, capture personnel or equipment, or to destroy a capability. Amphibious raids are conducted as independent operations or in support of other operations. Depending on the purpose of the raid, it may be conducted using clandestine insertion means, relying on stealth to approach the objective or overtly with full fire support in a manner that may resemble the early stages of an amphibious assault. Navy and Marine Corps SOF provide specialized amphibious raid capabilities. Examples include the amphibious raids in the Pacific to support amphibious assaults in World War II or the amphibious raid on Umm Al Maradim during Operation DESERT STORM.

b. Generally, amphibious raids are conducted for the following reasons:

(1) **Destruction.** Amphibious raids may be required to destroy targets of such importance that indisputable confirmation of destruction is essential. Targets not easily destroyed by other means may be subject to destruction by a raid force. Political concerns regarding civilian or cultural collateral damage may necessitate a raid. Targets for destruction may include military or industrial installations; communication and energy facilities; and transportation nodes, such as rail and port facilities, bridges, and tunnels. Raids may have strategic, operational, or tactical significance.

(2) **Capture or Killing of Key Personnel.** These operations are normally directed against specific opposition leaders, those personnel possessing intelligence value,

or other high-value targets. The capture or killing of these personnel requires detailed planning. Timely and accurate intelligence is essential. The need to avoid advance warning of execution may require the force to be small in size while the target's location (e.g., in a complex urban area or an isolated mountain cave) and enemy disposition may require a larger reaction (covering) force. Friendly forces executing these types of operations normally try to avoid deliberate engagement with local forces, concentrating specifically on those forces protecting the target and with direct impact on mission execution. Execution authority for these operations may reside with the JFC or higher authorities.

(3) **Collect Information.** Amphibious raids may be conducted to collect information regarding enemy forces, including dispositions, strengths and weaknesses, movement, reaction to attack, and weapons. They may be used to obtain information on hydrography, beaches, terrain, and landing zones (LZs). All AFs, regardless of assigned mission, perform a secondary function of collecting and reporting information.

(4) **Evacuation and Recovery.** An amphibious raid may include tactical recovery of aircraft and personnel and in-extremis hostage recovery.

(5) **Diversion.** An amphibious raid may be conducted as a supporting effort to create a diversion or ambiguity in the enemy commander's perception of the situation. It may support or be the deception operation. Assignment of alternate targets is undesirable unless the objective is to create a diversion. In this case, authority to engage targets of opportunity may be granted.

(6) **Psychological.** A successful amphibious raid against a lawful military objective may impact the morale of enemy personnel. This may be desirable at the outset of hostilities, after extended periods of inactivity, or after tactical or operational setbacks. Raids conducted under such circumstances help maintain an offensive mindset within the force.

(7) **Support Forces in Contact.** An amphibious raid may support forces engaged with the enemy by attacking the enemy rear or flank or by forcing the enemy to defend the coastline, even though the focus is elsewhere as part of a larger operation or campaign.

(8) **Unconventional Warfare.** An amphibious raid may be conducted as part of or in support of unconventional warfare activities.

c. **Characteristics.** Amphibious raids have recognizable characteristics, whether conducted as separate operations or as part of a larger operation or campaign. The commander will articulate the specific objective to be achieved by the raid force. Amphibious raids are inherently dangerous; therefore, commanders assess and determine that raid objectives are worth the risk. The amphibious raid force may exit or enter the objective area via a variety of air, surface, and subsurface assets. Amphibious raids may be conducted by any force with the skills and equipment suited for the mission. Amphibious raid forces depend on surprise, detailed intelligence, timeliness of mission

execution, and violence of action at the objective. Thorough, integrated rehearsals are essential to precision and speed in executing an amphibious raid. All participating forces should be drilled in every detail of debarkation, movement ashore, operations ashore, withdrawal, and reembarkation. An amphibious raid is planned and executed in the same general manner as an amphibious assault, except that an amphibious raid will include a provision for withdrawal of the raiding force. Specific characteristics of amphibious raids include:

(1) Amphibious raids typically use ship-to-objective maneuver.

(2) The size of the amphibious raid force is normally limited to the essential number of personnel required to accomplish the mission. This increases the chance of maintaining OPSEC, achieving surprise at the objective, and facilitating rapid withdrawal on completion of the mission. The amphibious raid force is normally formed by task organizing from existing LF elements and is trained to conduct a specific mission.

(3) Synchronization of the attack with supporting and supported operations requires a coordinated timetable. Likewise, scheduled fires, on-station capability of attack and assault support aircraft, and meteorological and oceanographic (METOC) information may dictate the timing of the attack. When supporting arms are employed, they normally commence with the assault of the objective and continue through the final withdrawal.

(4) Selected beaches or LZs utilized during an amphibious raid do not necessarily need to meet all the requirements required of an amphibious assault. Beaches or LZs may be chosen to provide tactical surprise or facilitate withdrawal. The amphibious raid force can land on or near the objective and seize it before the enemy can react. This avoids forced marches over land carrying heavy combat loads. If there is no suitable landing area near the objective or the enemy has a strong reaction force nearby, the amphibious raid force can land far from the objective to reduce the chance of detection and enemy response. It then assembles, reorganizes, and moves into an objective rally point near the objective. The objective is seized after security and support elements are in place. This option may ease coordination by enabling a more complete orientation of the force before engaging the enemy.

(5) An amphibious raid will be of limited duration.

(6) The objective, nature, and duration of the operation may simplify logistic requirements.

(7) Compromise of the amphibious raid force or the AF before reaching the objective area may require execution of an alternate plan or require the CATF and CLF to abort the mission.

3. Planning and Execution of an Amphibious Raid

a. Surprise is essential for the success of an amphibious raid and helps to offset the lack of fire support in preparing the objective area. It is an inherent force multiplier

achieved by many means. Commanders should consider maximizing surprise through deception, stealth, speed, disguise, and ambiguity.

b. Movement to the objective area is conducted to avoid enemy detection and response. It is planned to enable the force to reach objectives in the manner best supporting actions in the objective area. Intelligence updates and final preparations are performed before debarkation.

c. The following factors will influence the choice of landing areas for the raid force:

(1) Enemy disposition.

(2) Sea approaches.

(3) Hydrographic and beach characteristics.

(4) Availability of LZs.

(5) Avenues of approach to the objective and beach exits.

d. The estimated time that the amphibious raid force is to be ashore may influence the choice of H-hour and, consequently, the conditions of visibility under which it may be landed and withdrawn. These factors likewise affect the scope of logistic support.

e. The purpose of the raid, including its relation to other concurrent or imminent operations that it may support, will influence the selection of its D-day. In addition, these same factors may affect the availability of shipping, aircraft, and logistic and fire support means for the raid.

f. Planning for the embarkation of forces assigned to participate in an amphibious raid is similar to preparation for the amphibious assault, including consideration of OPSEC measures. The most important consideration for embarkation and loading of ships, landing craft, helicopters, and tiltrotor aircraft is the support of the tactical employment of the raid force. Other considerations include capabilities of specific platforms, en route training and rehearsal requirements, defense of the amphibious raid force, and flexibility for contingency response.

g. Fire support planning is similar to that for an amphibious assault. However, because the success of an amphibious raid usually requires surprise, amphibious raid forces will generally not employ any fires to prepare the objective for the raid or other fires in support of their movement that might alert the enemy. Emission control (EMCON) and signature control (SIGCON) should be maintained throughout the operation, even if surprise is lost, to increase the survivability of the AF elements. Pre-H-hour fires may be an effective part of deception operations to draw enemy attention away from the raid force or its objective. On-call fire support should also be planned to support the amphibious raid force if it is detected en route and requires assistance to break contact, conduct an emergency withdrawal, or continue to the objective.

h. Detailed planning for an amphibious raid requires intelligence that enables the CLF to more precisely tailor the force size, conduct rehearsals, identify critical targets, and plan support. The availability or lack of intelligence affects all aspects of the amphibious raid.

i. Planning for ship-to-objective maneuver is generally similar to that for an amphibious assault except movement may be made entirely by air, subsurface, or surface craft. The amphibious raid force emphasizes silent landing techniques to reduce visual, audible, and electromagnetic footprints to preserve surprise. Small boats or landing craft are either cached ashore or returned to the ship. The method selected for the ship-to-objective maneuver should be one that will land the amphibious raid force with the least probability of detection, as close to its objective as possible, and as simply and rapidly as possible. Landings should take advantage of night and conditions of reduced visibility and detection. Care should be exercised in the introduction of advance reconnaissance elements designed to facilitate landing of the amphibious raid force or conduct target surveillance. Capabilities and benefits provided by employment of these elements should be weighed against the increased risk of compromise.

j. The withdrawal should be planned in detail, including time and place for egress and re-embarkation. It should be swift and orderly and is influenced by the time it takes to secure the objective, enemy reaction, time needed to care for and evacuate casualties, and the means of attack and withdrawal. Every effort is made to leave nothing of intelligence value behind. When equipment cannot be re-embarked, it is destroyed. Withdrawal should be tested during rehearsals. The means for withdrawal should be available for immediate loading when the amphibious raid force arrives at the beach or LZs. This is critical, as the enemy may be actively pursuing the raid force. Covering fire may be required to prevent enemy interference. Evacuation of casualties is expedited. Contingency recovery plans are designated in the raid plan. If the landing point and withdrawal point are not the same, positive means of location and identification of the latter should be established. Special situations may permit planning for withdrawal of the raiding force directly into friendly territory without re-embarkation. Withdrawal by air may be possible when the area of the amphibious raid includes a usable airfield or terrain suitable for landing helicopters and tiltrotor aircraft. Detailed planning should include provisions for an alternate extraction method in the event of inclement weather or enemy action. One consideration may be to have the raid force remain concealed ashore until extraction can be executed. Immediately on embarkation, the raid force is normally debriefed by designated commanders and staff.

k. A personnel recovery plan is essential should elements or individuals become isolated. Based on the personnel recovery command authorities established; a commander's awareness of the situation; and level of confidence in communication, authentication, location, intentions, condition, and given situation, recovery forces can be launched and/or given an execute order at any time after a personnel recovery report is received. Raid personnel are briefed on survival, evasion, resistance, and escape procedures beforehand and may have to depend on these skills to return to friendly areas.

For additional information on amphibious raids, see Marine Corps Reference Publication (MCRP) 3-30, Raid Operations. *For additional information on personnel recovery, see JP 3-50,* Personnel Recovery.

SECTION B. AMPHIBIOUS DEMONSTRATION

4. General

a. An amphibious demonstration is a show of force intended to influence or deter an enemy's decision. An amphibious demonstration's intent is to deceive the enemy, causing the enemy to select an unfavorable COA. An amphibious demonstration may be executed to confuse the enemy as to time, place, or strength of the main effort. Amphibious demonstrations may be conducted to delude or confuse the enemy. In the operational area, an amphibious demonstration may be conducted in or near the landing area in conjunction with an amphibious assault. In still other cases, a demonstration may be conducted outside the operational area by forces not attached to the supported AF to divert or immobilize enemy strategic reserve forces that could threaten the amphibious assault. Likewise, the demonstration could be used to divert enemy attention from other operations.

b. **Characteristics.** Effectiveness of a demonstration increases in direct proportion to the degree of realism involved in its execution. The enemy must be convinced that the amphibious demonstration force is preparing for an amphibious raid or assault. All visual, audible, and electromagnetic aspects of the demonstration must appear to be authentic. A demonstration normally includes the approach of forces to the demonstration area, at least a part of the ship-to-shore movement, and employment of supporting fires. A brief but intense preliminary bombardment will usually be more effective than deliberate harassing fire over longer periods of time. Communications plans should support the deception. Tactical deception units may be employed.

(1) **Demonstrations Within the Operational Area.** An amphibious demonstration may be conducted by a portion of the force within the operational area when it is intended to influence enemy action within that area. The intended purpose may be to cause the enemy to employ its reserves improperly, to disclose weapon positions, to distract attention, to place an early burden on communications systems, to precipitate a general air or naval engagement, or to harass. The decision to conduct such a demonstration is made during the planning phase, in consultation with supporting commanders as appropriate.

(2) **Demonstrations Outside the Main Operational Area.** An amphibious demonstration may be conducted outside of the main operational area to divert or immobilize enemy strategic reserves or other forces capable of affecting the main effort, to distract hostile attention from such an operation, or to precipitate a general air or naval engagement. Such a demonstration may be executed as a supporting operation by a separate AF. The time and place of the demonstration is decided by the JFC or higher authority based on the recommendations of the CATF and CLF.

(3) **Demonstrations in Support of Other Operations.** An amphibious demonstration may be conducted with the intent of supporting other operations in the theater or designated operational area. A demonstration conducted before, during, or after commencement of another operation may distract the attention of enemy commanders and induce the enemy to divert major resources.

AMPHIBIOUS OPERATIONS DURING THE GULF WAR

During the Gulf War, an additional dimension of deception activity, besides masking the stealthy relocation of the coalition line, was the demonstration of amphibious assault capabilities. As part of this ruse, an impressive amphibious assault task force was stationed conspicuously off the coast of Kuwait. This fleet was comprised of 40 amphibious landing craft, the largest such force to be assembled since Inchon. The force contained the most up-to-date, equipment-laden amphibious warfare ships, as well as aircraft and helicopter airlift. Battleships provided offshore artillery support. For movement to the beach, these forces were equipped with LVTP [landing, vehicle, track, personnel]–7s, LCAC [landing craft, air cushion] hovercraft, and CH–53E Super Stallion helicopters. In short, this was a powerful and credible force stationed threateningly close to the Iraqi defenses along the coast.

To solidify what must have been the Iraqi military's predicted axis of attack, USCENTCOM [United States Central Command] regularly made references to the press concerning the training capabilities and presence of the amphibious force in the Persian Gulf and, later, off the coast of Kuwait. Large-scale amphibious rehearsals were conducted, including, notably, the one held during the last 10 days of January in which 8,000 US Marines landed on the coast of Oman. Carrier air and naval surface fire support missions were executed throughout the period to support suspicions of a major coalition amphibious assault.

So that Iraqi commanders would continue to anticipate an amphibious attack, US amphibious fire support vessels remained along the coast positioned as if threatening to attack, and the battleships Missouri and Wisconsin and carrier-based aircraft continued bombardments. The objective was to fix the six Iraqi infantry divisions deployed along the shoreline, and this was achieved.

SOURCE: Deception: Deceiving the Enemy in Operation DESERT STORM, Thomas M. Huber, 1992

5. Planning and Execution of an Amphibious Demonstration

a. **Location.** The demonstration area should be near enough to the main effort to permit subsequent employment of the demonstration force if required. It should also be sufficiently separated from the main effort to avoid interference and intelligence collection that may inadvertently detect the demonstration force and to delay the enemy in repositioning forces. The demonstration area must be suitable for an actual landing so the threat of landing is plausible. An alternate landing area will often prove suitable for demonstration purposes. If the purpose of the demonstration is to cause the enemy to prematurely disclose its positions or for harassment, it may be conducted prior to execution of the actual amphibious assault or other joint operation. Rehearsals outside of the immediate operational area may also serve as effective demonstrations or to enhance an enemy perception of a pending assault.

b. **Timing.** The timing of a demonstration conducted in support of another operation should be scheduled to achieve the maximum desired level of reaction from the enemy force.

(1) A demonstration before the main operation is conducted to:

(a) Draw enemy forces to the demonstration area and away from the area of the main operation.

(b) Cause the enemy to disclose its positions.

(c) Provide protracted and systematic harassment.

(d) Cause premature commitment of enemy forces.

(2) A demonstration may commence at the same time as the main operation if it is desired to prevent redeployment of enemy forces and deceive the enemy as to the location of the main operation.

(3) A demonstration may be conducted subsequent to the main operation to divert enemy forces or fire from the point of the main effort. Successive demonstrations may be executed at a number of points after the main operation commences.

c. **Forces.** The demonstration force must appear to be of such composition and size as to cause the desired reaction. When the demonstration force is constituted from within the AF, the LF reserve and the shipping in which it is embarked may be employed if the presence of the reserve is not required in the immediate area of the main landing.

d. **Supporting Arms.** The demonstration force should execute supporting fires of a nature and scope that provides credibility for the force and operation. Factors that may serve to limit the amount of supporting fires are the availability of naval surface fire support (NSFS) ships, aircraft, and ammunition supply.

e. **Rehearsals.** Sufficient rehearsals should be held to aid the perception that the demonstration is an actual amphibious raid or assault.

f. **Action.** The demonstration should occur over a long enough period to cause the enemy to react. The movement of waves toward the beach or LZs should be conducted as a normal ship-to-shore movement, except that boat waves normally do not actually beach and helicopter and tiltrotor aircraft waves do not land. Empty landing craft must maintain sufficient distance from the beach to preclude close enemy observation. As our enemies will most likely utilize unmanned aircraft systems to conduct intelligence and surveillance against the AF, measures to deny their effectiveness should be included in the plan to increase the plausibility of the amphibious demonstration. At a prearranged time or distance from the beach and LZ, or on signal, the boat waves and helicopter and tiltrotor aircraft waves withdraw. On completion of the demonstration, the demonstration force is dissolved and its elements are reassigned in accordance with the OPORD or OPLAN.

SECTION C. AMPHIBIOUS ASSAULT

6. General

a. An amphibious assault is launched from the sea by an AF, embarked in ships or craft, to employ an LF on a hostile or potentially hostile shore. An amphibious assault requires the rapid buildup of combat power ashore, from an initial zero capability to full coordinated striking power as the attack progresses toward AF objectives. The assault begins on order after sufficient elements of the assault echelon (AE) arrive in the operational area and specified operational criteria for landing are met. For an assault, the action phase ends when conditions specified in the initiating directive are met, as recommended by the CATF and CLF and approved by the JFC or designated commander. Amphibious assaults may be used to initiate a campaign or major operation, such as the 1942 landing on Guadalcanal, which began the campaign to neutralize the enemy base at Rabaul in the Southwest Pacific, or the 1944 Normandy landings that established a beachhead for the Allied campaign across Western Europe.

b. The assault is the most difficult type of amphibious operation and one of the most difficult of all military operations due to its complexity. Many of the principles and procedures of the amphibious assault apply to other types of amphibious operations. The normal sequence during the action phase of the operation is depicted in Figure II-1.

7. Planning and Execution of an Amphibious Assault

a. The LF mission is developed after careful analysis of the AF mission and only after all specified and implied tasks are identified and understood. The mission is translated into specific LF objectives by the CLF. These objectives serve as the primary basis for determining the LF scheme of maneuver, fire support, organization for combat, formation for landing, landing plan, and logistic support requirements. The CONOPS is the principal means by which the commander's intent is promulgated, enabling subordinate and supporting commanders to understand the commander's vision and accomplish detailed planning and execution of the operation.

b. In the amphibious assault, combat power is progressively phased ashore. In planning the organization for landing, the CLF would have already considered the extent to which, if any, forces could remain sea-based, such as C2 and logistics. Units with tailored capabilities to provide the required landing site through LZs; landing craft, air cushion landing zones (CLZs); and beach landing sites are moved in the first waves. Examples include reconnaissance, combat engineer, and light and/or heavy armored infantry (e.g., light armored vehicles, AAVs, unmanned aerial vehicles, and tanks) supported by helicopters and fixed-wing and tiltrotor aircraft. Combat power is then built up on shore as rapidly as possible in an orderly progression as reflected in the organization for landing. NSFS, SOF, carrier strike group (CSG) assets, and other ATF and LF forces may also be used to support the combat buildup ashore.

For more information on LF echelons, see Chapter V, "Embarkation, Rehearsal, and Movement," paragraph 8, "Echelons of the Landing Force."

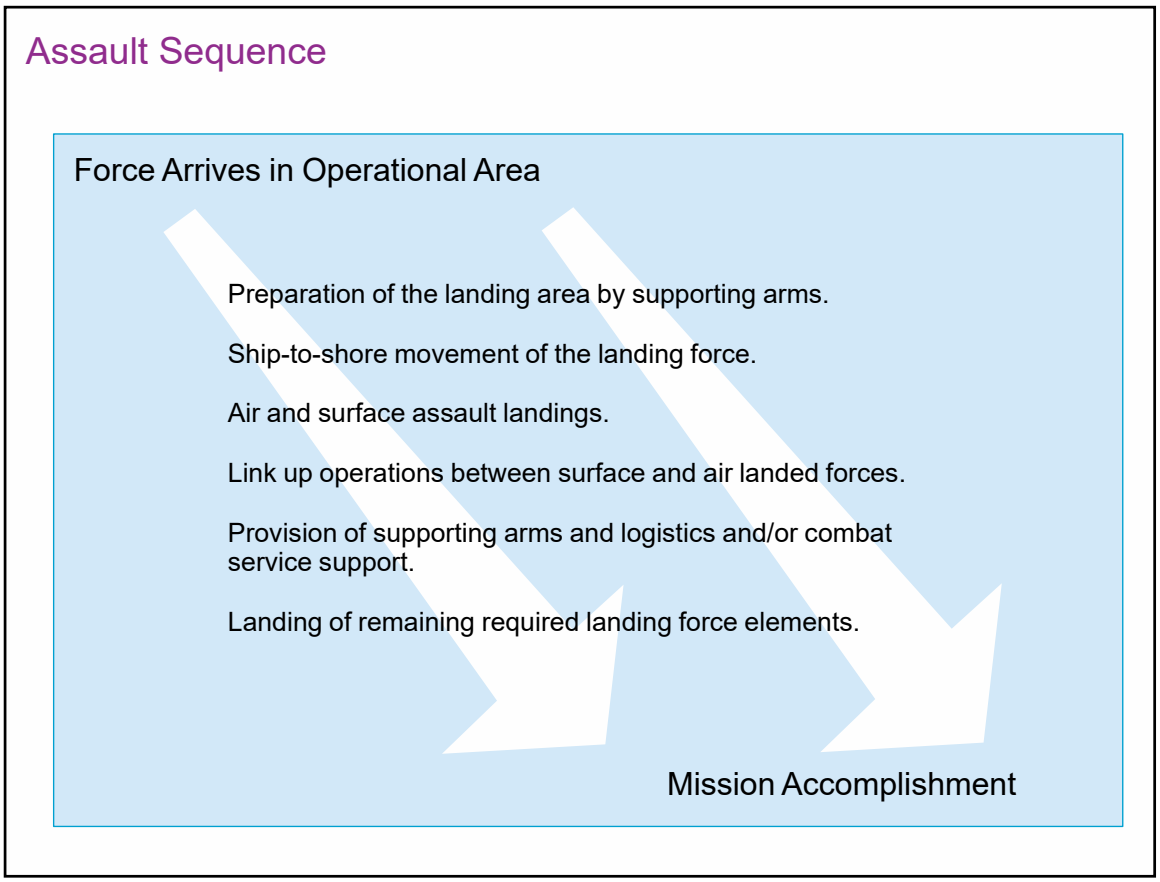

Figure II-1. Assault Sequence

c. The time required to phase the LF's combat power ashore depends on many factors, to include, but not limited to:

(1) Degree of enemy, noncombatant, and civilian interference with the landing.

(2) Availability, by type and number, of ship-to-shore movement assets.

(3) Availability, by type and number, of amphibious warfare ships.

(4) The location of the transport areas with respect to the beach.

(5) Capacity (including throughput considerations) of landing beaches, drop zones (DZs) and LZs.

(6) Extent of fire support available to the LF prior to establishing organic assets ashore.

(7) Terrain, weather, and sea conditions in the landing area.

(8) Available maneuver space and trafficability considerations in the landing area.

d. The LF will seldom be able to secure control of the landward section of the landing area in a single landing. Therefore, the CLF will have to phase forces ashore during execution. Intermediate objectives and phase lines may be used to track and control the phasing of forces ashore. Phasing can revolve around many mediums: time (in relation to H-hour, L-hour, or D-day), distance (intermediate objectives or phase lines), terrain (crossing of obstacles), or event (link up with surface or airborne forces or seizure of an off-shore fire support position). Regardless of the method used, the plan should be based on sound decisions and the capabilities of the AF as a whole. The action phase is characterized by decentralized execution, especially during the landing of scheduled waves. The concept for phasing combat power ashore should plan for the reestablishment of centralized control of the LF. This reestablishment of centralized control normally progresses successively from lower to higher echelons.

e. The formulation of the LF scheme of maneuver for an amphibious assault is based on the same fundamentals of warfare normally associated with all military operations. However, there are a few conditions and considerations that may require particular attention.

(1) **The fundamental objective is to rapidly build combat power to establish the LF ashore and accomplish the assigned mission.** Normally, starting with zero combat capability ashore, the LF seeks the early seizure of key objectives through aggressive offensive action to disrupt enemy defenses, permit the rapid landing of supporting units, and contribute to the rapid development of full combat power ashore.

(2) **The scheme of maneuver may support the rapid buildup of combat power ashore vice the immediate seizure of AF objectives.** The scheme of maneuver may enable the engagement of the enemy on ground chosen by the CLF and at a time that gives the LF a marked advantage.

(3) **The landing of the force at separate locations can create problems in achievement of mass,** with attendant difficulties in C2, fire support, and other functional areas. The CLF can overcome this obstacle by determining that the major elements of the LF fully understand the mission and commander's intent and are task-organized to act independently during the early stages of the operation.

(4) The types and numbers of combat units in the LF task organization and their strength influence the scheme of maneuver.

(a) LFs that have organic or attached combat support and CSS capabilities are usually better suited for amphibious operations than LFs comprised of infantry units alone.

(b) Armored elements provide substantial combat power and mobility for the LF.

(c) Artillery in the AE may be either self-propelled or towed.

(d) Combat engineers will normally be task-organized to infantry and mechanized units to provide support such as gap crossing and minefield and obstacle reduction.

(e) Air defense units organic to the LF are established ashore early to provide for the landward extension of an air defense system. They will be part of the CATF's integrated air defense system until control is phased ashore. It is important the CLF understands the CATF's integrated air defense plan. Land operations might rapidly move LF elements beyond the range of AF antiair and missile defenses requiring support from other forces (such as those adjacent to the AOA or AO).

(5) The LF scheme of maneuver should meet certain key requirements:

(a) Its primary purpose should be the seizure of objectives requisite to the buildup and establishment of the LF ashore.

(b) Should utilize all avenues of approach proximate to the selected beaches and LZs.

(c) Be supportable by NSFS, missiles, and tactical air, especially prior to the landing of artillery.

(d) Be supportable by an AE capable of initial success without dependence on other assault units.

(e) Provide for the development of mutual support between units as the attack progresses.

(f) Provide for early establishment of combat service support areas (CSSAs) as required.

f. Considerations for use of reserve force.

(1) Commitment of the reserve force in an amphibious assault may be more complex than in normal land operations.

(2) When afloat, the reserve force may be delayed pending availability of landing craft, amphibious vehicles, helicopters, or tiltrotor aircraft, plus the time required for debarkation and movement ashore.

(3) Employment of the reserve force may delay the movement of other assault formations because all elements of the LF share the same ship-to-shore movement assets.

(4) Landing of the reserve force by surface means depends on the availability of landing craft, as well as a suitable landing beach near the area of intended employment.

g. The assault follow-on echelon (AFOE) is the assault troops, vehicles, aircraft, equipment, and supplies that, though not needed to initiate the assault, is required to

support and sustain the assault. It is divided into air-lifted and sea-lifted forces and supplies. Required arrival time in theater, suitability of material for air- and sea-lift, and lift availability, in that order, are the criteria to determine the best transportation mode. Some other considerations for the AFOE are:

(1) The AFOE is organized for landing and embarkation, respectively, based on anticipated requirements of operations ashore. Units, personnel, and material configured in shipload and planeload lots as dictated by landing and embarkation plans are then organized into movement groups. Embarkation plans are prepared by the LF and appropriate subordinate commanders containing instructions and information concerning the organization for embarkation, assignment to shipping, supplies and equipment to be embarked, location and assignment of embarkation areas, control and communication arrangements, movement schedules and embarkation sequence, and additional pertinent instructions relating to the embarkation of the LF.

(2) Units and their equipment are marshaled at their home stations or forward bases and staged at ports of embarkation in accordance with their time-phased deployment schedules. Materiel arriving from logistic sources is assembled at ports of embarkation under LF supervision.

(3) AFOE material should be containerized.

(4) It may be necessary for commanders of amphibious transport groups to augment port and embarked security forces to protect against sabotage of equipment because of the large number of foreign nationals employed by foreign flag shippers and port facilities.

(5) Ship unloading is directed by the normal ATF-LF ship-to-shore control and support activities (e.g., primary control officer [PCO], amphibious air traffic control center [AATCC], tactical-logistical [TACLOG] group, landing force support party [LFSP]). The size and organization of these agencies will change as the operation matures. Additional cargo handling battalion and amphibious construction battalion forces may be required to support the off-load of merchant ships. As they become accessible, seaports and aerial ports are used to supplement traditional beach operations, expanding the ship-to-shore organization accordingly. The CATF and CLF are responsible for debarkation and off-load until termination of the amphibious operation. In the case of an amphibious assault, the amphibious operation would not normally be terminated until the entire AFOE is ashore. At that time, the responsibilities for off-load of follow-up materiel may be passed to another off-load organization designated by higher authority.

h. Follow-up shipping and aircraft carry reinforcements and stores for use after landing of the AE and AFOE. The CATF will assume control of follow-up ships and aircraft on arrival in the operational area.

SECTION D. AMPHIBIOUS WITHDRAWALS

8. General

a. Amphibious withdrawals are operations conducted to extract forces in ships or craft from a hostile or potentially hostile shore. They may be conducted under enemy pressure or under operational urgency in permissive, uncertain, or hostile environments to obtain forces needed elsewhere or to remove forces whose mission is completed. Withdrawal begins with establishment of defensive measures in the embarkation area and AOA or operational area and ends when all elements of the force have been extracted and embarked on designated shipping. For instance, a withdrawal could involve the extraction of forces, such as at Hungnam, Korea (1950), or a withdrawal of United Nations forces from Mogadishu, Somalia (1995).

b. **Characteristics of Amphibious Withdrawals.** While sharing many traits of the amphibious assault, the amphibious withdrawal embraces the following distinguishing characteristics:

(1) Except in the case of withdrawals associated with amphibious raids, planning processes will usually be abbreviated.

(2) Time available to execute will be limited when enemy action against the withdrawing force is substantial or when the requirement to re-employ the force elsewhere is urgent.

(3) Facilities and equipment for embarkation, available fire support means, and means for C2 of the withdrawal may be limited.

(4) The operation may be conducted under adverse conditions (i.e., weather, unfavorable terrain, or hydrographic features).

(5) The force to be withdrawn may not have been inserted by an amphibious operation and its units may be unfamiliar with amphibious embarkation procedures, thus significantly complicating the operation.

(6) Additionally, there may be the requirement to evacuate significant numbers of foreign nationals as US forces are withdrawing.

9. Planning and Execution of an Amphibious Withdrawal

a. The amphibious withdrawal is normally executed in the following general sequence of steps:

(1) Establish defense of the withdrawal and embarkation areas by air, naval, and ground-covering forces while organizing and embarking LF personnel, supplies, and equipment not required for support of operations ashore. As such, maintaining local air and maritime superiority is essential to provide for the safety of personnel during the withdrawal.

(2) Progressively reduce troop strength and quantity of materiel and equipment ashore. Depending on limitations in afloat cargo capacity and loading time, all usable military materiel should be evacuated or destroyed.

(3) Consideration should be given to the difficulty of embarking heavy elements such as artillery and armor. Ground elements being withdrawn that were not employed ashore as part of an LF may be required to expeditiously reconfigure or modify their equipment for the shore-to-ship movement and embarkation aboard amphibious warfare ships.

b. As in the amphibious assault, defense of an embarkation area on a hostile or potentially hostile shore requires closely coordinated employment of all available supporting arms. Planning for and execution of a withdrawal is more complicated due to security concerns and possible lack of port facilities. A larger USN covering force, such as a CSG or surface action group, may be required. Procedures used in the coordination are essentially the same in both cases. The primary difference is that, in the assault, supporting arms and control facilities are progressively built up ashore, whereas, in a withdrawal, supporting arms and control facilities are progressively decreased ashore until all functions are performed afloat.

c. Planning for the withdrawal of ground elements (or other elements) of the joint or multinational force is more complicated than for those that may have been employed ashore as part of a previously embarked LF. These elements should assign unit and team embarkation officers to begin planning with the ATF upon notification that a withdrawal by sea might be required.

d. While a re-embarked LF may be able to be immediately re-employed elsewhere with another force(s), an intermediate staging base (ISB) may be required to address equipment concerns, organize, reconfigure loads, and adjust off-load priorities prior to accepting a new mission.

SECTION E. AMPHIBIOUS FORCES SUPPORT TO CRISIS RESPONSE AND OTHER OPERATIONS

10. General

a. AFs support to crisis response and other operations focuses on providing a rapid response to crises, deterring war, and resolving conflict. AFs routinely conduct support to other operations such as security cooperation, FHA, NEOs, peace support operations, recovery operations, or protecting US facilities and personnel abroad. In the last 20 years, amphibious support to crisis response and other operations has been the most common type of amphibious operation. Examples of these operations include the 1999 peace operations in Macedonia, the 2006 NEO in Beirut, the 2007 African Partnership Station, the 2010 FHA operations in Haiti and Pakistan, enforcement of the no-fly zone over Libya in 2011, and the 2013 operations to capture high-value individuals in Libya.

b. Many of these operations are conducted by forward-deployed ARGs and MEUs. The ability to operate either OTH or within sight of land provides an ability to demonstrate

a varying degree of US force presence. Task-organized elements, precisely tailored for specific missions, can be inserted, employed, and withdrawn to meet specific military or diplomatic objectives. The ability to operate from a sea base reduces the overall footprint ashore, thus reducing the potential diplomatic impact, as well as reducing the potential threat to the force. The maneuverability of sea-based forces enables them to conduct operations over a large area. The ship-to-shore movement capability and the ability to shelter, feed, and provide medical care provides maritime forces with unique capabilities when conducting NEO and FHA. The AF may be only one of many participating US and foreign governmental or international organizations. As a result, these operations normally have more restrictive rules of engagement (ROE). The goal is to achieve national objectives as quickly as possible and conclude operations on terms favorable to the US and its allies.

11. Planning and Execution of Amphibious Force Support to Crisis Response and Other Operations

a. **NEOs.** A NEO is similar to an amphibious raid in that there is a rapid insertion of forces followed by a planned withdrawal. Forward-deployed ARGs and MEUs are trained and certified to conduct NEOs. Specific amphibious planning considerations for NEOs are:

(1) On arrival in the area, the CATF establishes and maintains positive communications and effects liaison with local diplomatic representatives. The CLF should be prepared to augment or duplicate communications.

(2) The evacuation site party conducts ground reconnaissance of proposed assembly areas, evacuation sites, beaches, LZs, DZs, airports, and ports.

(3) The CLF may be tasked to augment existing security forces or to provide forces to secure the evacuation area. Specific and detailed ROE should be promulgated.

(4) Screening and identification of evacuees are normally primary responsibilities of the diplomatic agency. When operational considerations dictate, screening and identification may be executed ashore by other security forces, by the LF, or by elements of the ATF aboard ship. Shipboard screening may be centralized or conducted aboard each ship. The AF may be required to augment emergency medical and dental treatment ashore.

(5) Evacuation may be made by motor vehicle, ATF shipping, commercial shipping, aircraft, or a combination of these modes. If by motor vehicle, the CLF may be tasked to provide convoy control, communications, and security. When the NEO could take place in a potentially hostile environment, the CLF may need AAVs (or other armored vehicles) to transport the evacuees. Shore-to-ship movement may be made with organic surface and aircraft of the AF. Evacuation by air may be via commercial aircraft from airfields or by use of LF aviation assets. The CLF may need to provide security for the airfields and LZs.

(6) Delivery to safe haven may be accomplished by ships of the ATF. Consideration should be given to using less critical ships for evacuation to minimize mission degradation if these ships depart the area for the safe haven prior to the completion of the mission. Ships that provide C2, landing craft, and aircraft may be required to remain in the operational area for the duration of the mission. Evacuees are normally transported as soon as practicable to the closest safe haven or transported for further evacuation from an available airfield or airport. The CLF may be tasked to provide guides and baggage handlers and augment shipboard security.

(7) Operations to protect civilians, noncombatants, and installations are characterized by the necessity for as much detailed planning and liaison as time permits, extensive coordination and communications between military and civilian agencies, additional reporting as a requirement of high-level interest, positive C2, and restrictive ROE. The operational environment may range from civil disorders to major operations requiring the LF ashore to be supported by NSFS. The installations being protected are normally the throughput nodes for the NEO. The CLF could be expected to provide a portion of the ground combat element (GCE) forces for security to reinforce existing defense forces, aviation combat element (ACE) assets for transport or aerial fire support, and logistical support to the forces ashore or to the installation involved.

(8) In their planning, the CATF and CLF may need to consider potential US embassy or Department of State requests to evacuate CBRN-contaminated or contagious evacuees. The capabilities to handle these individuals are extremely limited onboard ship and may impact the ship for further operations. Evacuees will likely need to be decontaminated and segregated while ashore.

For more information on NEOs, see JP 3-68, Noncombatant Evacuation Operations.

b. **FHA.** Forward-deployed ARGs and MEUs may provide an immediate response capability to respond to FHA operations. They may also form the core of the command element (CE) for a joint task force (JTF) headquarters as the US response matures. AFs can significantly tailor their footprint ashore. This includes airlift support with helicopters and tiltrotor aircraft; waterborne movement of vehicles and supplies; personnel recovery; general engineering, such as limited debris removal; medical and dental support; and providing a secure platform for staging until a larger force arrives. The LF also has response teams, platoon-sized elements capable of detecting a wide range of CBRN hazards. The ATF ships can provide a safe and accessible location for the JTF or combined JTF headquarters and select interagency members and multinational force (MNF) personnel. They also provide seabasing support to the joint force; have a limited ability to produce and distribute electrical power and clean water; and carry Class III (Petroleum, Oils, and Lubricants), to include a limited amount of gasoline to support the operation ashore. In addition to the large and varied quantity of supplies and equipment embarked on and available from amphibious warfare ships, afloat pre-positioning force (APF) ships have the capability to purify water and transfer it ashore. Bulk petroleum, oils, and lubricants transfer capability is also available. The maritime pre-positioning force (MPF) brings improved Navy lighterage system (INLS), which includes causeway ferries and roll-on/roll-off (RO/RO) discharge facilities that can be

A Royal Thai Navy medium tactical vehicle drives onto the beach from Landing Craft Utility 785, assigned to the Royal Thai amphibious and combat support service squadron, while participating in a humanitarian assistance and disaster response training exercise during Cooperation Afloat Readiness and Training Thailand 2012.

used to support the ship-to-shore movement. Specific amphibious operations planning considerations are as follows:

(1) The CATF should prepare an estimate of the ATF disaster relief supplies and equipment requirements, personnel availability and their skills, and the extent of contingency funding. Similarly, the CLF should prepare an estimate of LF disaster relief capabilities; this estimate would include an analysis of personnel skills, equipment, supplies, and special capabilities of units as they individually relate to likely disaster relief. Skill sets could include planners with regional/country or disaster response expertise, commercial bus or truck licensed drivers, foreign language skills, and familiarity with local area.

(2) To understand the disaster's impacts, the CATF and CLF should have a comprehensive understanding of the current state of disaster response efforts. Civil affairs forces, if available, and organic intelligence support can assist with this research and liaison.

(3) Additional augmentation and redistribution of personnel in the AF may be required. It may be necessary, for example, to augment appropriate amphibious warfare ships with tactical air control center and flight deck personnel to conduct 24-hour flight deck operations. Additional medical staff may also be assigned. In some cases, it may be possible to redistribute available manning to perform certain functions (e.g., increase the number of food service attendants if the ship will be feeding large numbers of additional people).

(4) The CATF and CLF should manage expectations and clearly articulate their role and capabilities and limitations. It is critical to integrate the public affairs officer into the operational planning process to ensure situational awareness of the actions and locations of operational forces. This awareness is critical to the public affairs officer's ability to provide advice and counsel to commanders and staff on public sentiment, particularly with respect to the impact the joint force has on the operating environment and its external audiences, the potential unintended consequences of planned actions, and the identification of perceived disparities between actions and words.

(5) Since FHA operations are typically conducted in support of the US Agency for International Development or Department of State, the CATF and CLF will normally be in a supporting role; thus, the JFC may not be responsible for determining the mission or specifying the participating agencies. The CATF and CLF should plan for interaction and coordination with interagency representatives, the GCC, local government agencies, and international organizations. Because of the number of civilian and non-United States Government (USG) entities involved in FHA activities, command relationships outside the Department of Defense (DOD) command structures may not be clearly defined. Therefore, appropriate organization, C2, and an understanding by the CATF and CLF of the objectives of the organizations involved are all means to improve unity of effort.

OPERATION ODYSSEY DAWN

Joint Task Force ODYSSEY DAWN was a US Africa Command task force established to provide operational and tactical command and control of US military forces supporting the international response to the unrest in Libya and enforcement of United Nations Security Council Resolution (UNSCR) 1973.

While Operation ODYSSEY DAWN escalated rapidly, the US Navy and US Marine Corps were already positioned for operations over Libya. Chief of Naval Operations, Admiral (ADM) Gary Roughead, said, "Military assets, including Amphibious Squadron Four KEARSARGE Amphibious Ready Group (ARG) and the 26th Marine Expeditionary Unit (MEU) from the US, along with coalition countries, launched Operation ODYSSEY DAWN on March 19, 2011 against targets inside Libya and subsequently supported Operation UNIFIED PROTECTOR aimed at protecting civilians from attacks perpetrated by pro-Muammar Al-Qadhafi forces." Commandant of the Marine Corps, General James F. Amos, further emphasized, that as trouble brewed in North Africa, the 26th MEU left its 1,400-Marine ground combat element in Afghanistan, sailed to the Mediterranean Sea, and linked up with the majority of 1st Battalion, 2d Marines, in Souda Bay, Crete, which had deployed there with less than 20 hours' notice from Camp Lejeune, North Carolina. With a full complement of Marines, the amphibious force took station off the coast of Libya and began flying combat missions in support of Operation ODYSSEY DAWN.

USS [United States Ship] KEARSARGE supported four embarked staffs simultaneously. Tactical Air Control Squadron 21 Det 1, embarked on KEARSARGE, provided continuous joint operations area (JOA) wide tactical air command and control while the Joint Intelligence Center provided JOA-wide support. US Navy EA-18G Growlers from coalition bases provided electronic warfare support over Libya. AV-8B Harriers of the 26th MEU, operating from KEARSARGE, conducted strikes resulting in 69 targets destroyed out of a total of 78 air interdiction sorties in the vicinity of Ajdabiyah, Libya, against Qadhafi's ground forces and air defenses joining an international effort to enforce UNSCR 1973 to halt an offensive against the Libyan populace. "Protecting the innocent and conducting combined operations are what we are designed to do," said Colonel Mark J. Desens, commanding officer of 26th MEU. "Our forces are doing both as part of the US commitment to protect Libyan citizens."

On 21 March 2011, a US Air Force F-15E Strike Eagle experienced mechanical problems and crashed in Libya while flying in support of Operation ODYSSEY DAWN. Both crew members ejected, received minor injuries, and were safely recovered from northern Libya. ADM Roughead praised the tactical recovery of the airmen. "KEARSARGE launched a V-22 Osprey that got in quickly and made the recovery." One of the crew was recovered from the crash site by a combat search and rescue task force from the 26th MEU using two AV-8B Harriers, two MV-22A Osprey, and two CH-53E Super Stallions. The CH-53E Super Stallions carried a quick reaction force. During the operation, the AV-8Bs dropped two 500-pound laser-guided bombs in support of the rescue. The other crew member was rescued by Libyan rebels and then recovered. "That's what you get when you have a global Navy that's forward all the time," ADM Roughead said. "We don't surge, and we don't ride to the sound of the guns. We're there, and when the guns go off, we're ready to conduct combat operations, or, as you see in Japan, ready to conduct some pretty extensive humanitarian operations."

KEARSARGE ARG and 26th MEU conducted missions ranging from combat operations to humanitarian assistance. Deployment as planned was to be mostly aggregated, and operations were planned to be sequential in nature. "The ships of the ARG provided persistent and flexible sea basing in support of ODYSSEY DAWN and throughout the deployment across multiple combatant commands," said Captain Pete Pagano, commander of KEARSARGE ARG. The deployment, as conducted, was disaggregated, complex, required continuous planning, and involved simultaneous execution. For their respective operations, these forces formed the primary US naval forces employed by national authorities in the southern Mediterranean and were used in lieu of carrier strike groups (CSGs), highlighting the flexibility of amphibious forces to conduct crisis response and strike missions in lieu of what might have required a dedicated CSG employment.

Various Sources

(6) The AF planners should consider the following:

(a) Security requirements for the landing beaches and LZs.

(b) Airspace coordination for civilian helicopters, fixed-wing aircraft, and unmanned aircraft that may be operating in the areas supporting the relief effort.

(c) Method to track AF personnel who are ashore (who, where, and why).

For more information on FHA, see JP 3-29, Foreign Humanitarian Assistance*, and Navy Warfare Publication (NWP)* 3-29, Disaster Response Operations.

c. **Other Operations.** Other operations may include military engagement, security cooperation, deterrence activities, personnel recovery, civil-military operations, counterproliferation, defense support of civil authorities, and peace operations. In supporting these operations, the AF employs and inserts task-organized elements that can be tailored for the specific mission. The ability to operate from a sea base reduces the overall footprint ashore, thus reducing the potential for a real or perceived negative diplomatic impact, while at the same time reducing the potential threat to the force. It enables operations in locations where a footprint ashore is not available or diplomatic engagement with a host nation is not timely or is prohibited. JFCs use AFs to interact with partner nations to enhance security and governance. This can be accomplished through mutual security training to expand the number of maritime professionals, assist nations in developing maritime awareness, infrastructure, law enforcement expertise, and the ability to respond to maritime threats and challenges. Building partner capacity and capability is achieved through information exchange, training and exercise opportunities, multinational operations, and interoperability enhancements. The AF can also effectively conduct sea control when surface combatants, submarines, and other ships are attached or the AF is otherwise supported by joint assets. Additionally, depending on the situation, the CATF and CLF may also have capabilities available to further support sea control.

For more information on other operations supported by an AF, see JP 3-05, Special Operations, *and JP 3-07,* Stability. *For more information on peace operations, see JP 3-07.3,* Peace Operations*; JP 3-28,* Defense Support of Civil Authorities*; JP 3-50,* Personnel Recovery*; JP 3-57,* Civil-Military Operations*; and JP 3-40,* Countering Weapons of Mass Destruction.

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CHAPTER III
COMMAND AND CONTROL

"Amphibious warfare requires the closest practicable cooperation by all the combatant services, both in planning and execution, and a command organization which definitely assigns responsibility for major decisions throughout all stages of the operation...."

Admiral Henry K. Hewitt, US Navy (1887-1972)

1. General

a. The organization of the AF should be sufficiently flexible to meet the planned phases of the operation and any development that may necessitate a change in plan. Sound organization provides for unity of effort through unity of command, centralized planning and direction, and decentralized execution.

Refer to JP 1, Doctrine for the Armed Forces of the United States*, for more details on joint force organization.*

b. All joint forces include Service component commands that provide administrative and logistic support. The JFC may conduct operations through the Service component commanders or at lower echelons. This relationship is appropriate when stability, continuity, economy, ease of long-range planning, and scope of operations dictate organizational integrity of Service forces for conducting operations. The JFC has full authority to assign missions, redirect efforts, and direct coordination among subordinate commanders. The JFC should enable Service tactical and operational assets and groupings to function generally as they were designed with the intent being to meet the requirements of the JFC while maintaining the tactical and operational integrity of the Service organizational structure.

c. JFCs may decide to establish a functional component command to integrate planning; reduce JFC span of control; and significantly improve combat efficiency, information flow, unity of effort, weapon systems management, component interaction, or control over the scheme of maneuver.

d. The terms CATF and CLF are used throughout this publication to clarify the doctrinal authorities, relationships, and responsibilities of these commanders. The CATF is the Navy officer designated in the initiating directive as the commander of the ATF. The CLF is the officer designated in the initiating directive as the commander of the LF for an amphibious operation. During operations, amphibious commanders should be referred to by their assigned task force or task group designators (e.g., Commander, Task Group 62 [Expeditionary Strike Group (ESG)], or Commander, Task Group 62 [Marine Expeditionary Brigade (MEB)]).

e. Command relationships during multinational operations are based on international standardization agreements or on bilateral or multilateral agreements between nations and will be defined in the initiating directive.

Refer to JP 3-16, Multinational Operations, *and Allied Tactical Publication-8,* Doctrine for Amphibious Operations, *for more information on North Atlantic Treaty Organization (NATO) amphibious operations.*

SECTION A. OVERALL COMMAND AND CONTROL

2. Joint Force Commander

a. The JFC achieves unity of effort in pursuit of amphibious objectives by establishing unity of command over AFs. The JFC establishes unity of command over AFs by either retaining OPCON over the Service or functional component commands executing the amphibious operation or by delegating OPCON or TACON of the AF. The JFC may remain the common superior to the CATF and CLF. The JFC may also delegate this responsibility to a subordinate commander that is neither the CATF nor CLF. When forces are transferred, the command relationship that the gaining commander will exercise (and the losing commander will relinquish) over those forces must be specified.

b. The JFC will organize the AF in such a way as to best accomplish the mission based on the CONOPS.

c. The command relationships established between the CATF and CLF and other designated commanders are important decisions. The relationship chosen by the common superior commander, or establishing authority, between the CATF, CLF, and other designated commanders should be based on the mission, nature, and duration of the operation, force capabilities, operational environment, and recommendations from subordinate commanders. While the full range of command relationship options as outlined in JP 1, *Doctrine for the Armed Forces of the United States,* is available, in amphibious operations, Service component commanders normally retain OPCON of their respective forces. If the JFC organizes along functional lines, functional component commanders will normally exercise OPCON over their parent Services' forces and TACON over other Services' forces attached or made available for tasking.

(1) Typically, a support relationship is established between the commanders and is based on the complementary rather than similar nature and capabilities of the ATF and LF. However, it is not the intent to limit the common superior's authority to establish either an OPCON or TACON command relationship.

(2) Support is a command authority. This relationship is appropriate when one organization should aid, protect, complement, or sustain another force. The designation of the supported and supporting role of the AF commanders is important, as it conveys priorities to the commanders and staffs who are planning or executing the operation.

(3) Regardless of the command relationships, when the initiating directive is received, unique relationships are observed during the planning phase. The AF commanders are coequal in planning matters. Planning decisions should be reached on a basis of common understanding of the mission; objectives; and tactics, techniques, and procedures (TTP) and on a free exchange of information. Any differences between commanders that cannot be resolved are referred to the common superior, which, in many

cases, may be the establishing authority. If a change in the mission occurs after commencement of operations or if an amphibious operation is initiated from an afloat posture, coequal planning relationships (either as described above or as specified in the initiating directive) will apply to any subsequent planning.

(4) In addition to the initiating directive, an establishing directive should normally be issued to specify the purpose of the support command relationship, the effect desired, the scope of the action to be taken, and any shifts in the support relationship. The establishing directive is typically developed after the initiating directive. The initiating directive may include the establishing directive. Normally, the CATF and CLF will develop a draft establishing directive during the planning phase as the specifics of the support relationship are developed. The commanders within the AF submit the draft establishing directive to the establishing authority for approval. The establishing directive is essential in defining support relationships for (but is not limited to): SOF conducting supporting operations (includes any beach hydrographic surveys and reconnaissance), CSGs and theater antisubmarine forces conducting shaping operations to set maritime and air superiority, mine warfare (MIW) ships and other assets conducting mine clearance operations as part of a support force, United States Air Force (USAF) combat aircraft, combat logistic force ships, and any other joint and naval assets that may not be OPCON or TACON to the CATF and CLF. The establishing directive may come out as an order or other format. It may also include the following:

(a) Forces and other resources allocated to the supporting effort.

(b) Time, place, level, and duration of the supporting effort.

(c) Relative priority of the supporting effort.

(d) Authority, if any, of the supporting commander(s) to modify the supporting effort in the event of an exceptional opportunity or an emergency.

(e) Degree of authority granted to the supported commander over the supporting effort.

(f) Force protection responsibilities afloat and ashore.

(g) Establishment of air, sea, and ground maneuver control measures.

(h) Development of joint tactical airstrike requests and air support requests.

(i) Development of target nominations, establishment of fire support coordination measures (FSCMs), update of electronic order of battle, integration of air defense, and defining the role of the supporting arms coordination center (SACC).

(j) Development of the AF intelligence collection plan.

(k) Non-organic logistics support.

(5) The CATF and CLF will identify the events and conditions for any shifts of the support relationship throughout the operation, ideally during the planning phase, and forward them to the establishing authority for approval. See Figure III-1 for examples of when the relationship might shift between commanders.

(6) A supported commander may be designated for the entire operation; a particular phase or stage of the operation; a particular function; or a combination of phases, stages, events, and functions. Unless limited by the establishing directive or the initiating directive, the supported commander has the authority to exercise general direction of the supporting effort. General direction includes the designation and prioritization of targets or objectives, timing and duration of the supporting action, and other instructions necessary for coordination and efficiency. The establishing authority ensures the supported and supporting commanders understand the degree of authority that the supported commander is granted.

(a) If not specified in the initiating directive, the CATF and CLF will determine who has primary responsibility for the essential tasks during mission analysis in the planning process.

(b) In an operation of relatively short duration, the establishing authority will normally choose one commander as supported for the entire operation.

(c) When there is no littoral threat to the ATF, the establishing authority may designate the CLF as the supported commander for the entire operation.

Examples of Shifts in the Support Relationship

Mission	Supported Commander
Assault	CATF, then CLF
Raid with coastal threat	CATF, then CLF, then CATF
Inland raid with no coastal threat	CLF
Demonstration	CATF
Withdrawal	CLF, then CATF
Foreign humanitarian assistance	CATF or CLF

* Actual supported-supporting commanders will be designated by the establishing authority based on the specific mission requirements.

Legend

CATF commander, amphibious task force
CLF commander, landing force

Figure III-1. Examples of Shifts in the Support Relationship

(d) During the movement phase, the CATF may be designated the supported commander based on having responsibility for the major action or activity during that phase. The CATF may be designated the supported commander based on capabilities for airspace control and the CLF's air defense for the entire operation if, for example, the LF does not intend to establish a Marine Corps tactical air command center (Marine TACC) ashore.

(e) Considerations for shifts in the support relationship include, but are not limited to, the following:

1. Responsibility for the preponderance of the mission.

2. Force capabilities.

3. Level and type of threat.

4. Type, phase, and duration of operation.

5. C2 capabilities.

6. Operational area assigned.

7. Recommendations from subordinate commanders.

(f) The supporting commander determines the forces, tactics, methods, procedures, and communication methods to be employed in providing this support. The supporting commander will advise and coordinate with the supported commander on matters concerning the employment and limitations of the support, assist in planning for the integration of the support into the supported commander's effort as a whole, and communicate support requirements throughout the supporting commander's organization. The supporting commander ascertains the needs of the supported force and takes action to fulfill them within existing capabilities, consistent with priorities and requirements of other assigned tasks. The establishing authority resolves issues when notified by either the supported or supporting commander that the supporting commander cannot fulfill the needs of the supported commander.

(g) The AF and other forces may be embarked for what could be extended periods of time on the same platforms but responsible to different or parallel chains of command. Such parallel chains of command create special requirements for coordination. Except in cases of emergencies, no significant decision will be made by a commander in a chain of command that affects the plans, disposition, or intentions of a commander in another chain of command without prior consultation**.** In emergency situations, the commander making an emergency decision will notify corresponding commanders of the action at the earliest practicable time.

(h) In a contested littoral environment, the roles required of supporting and supported commander are complicated by the persistent threat to both the ATF and the LF. Assets from both the supported and supporting commander may be required to conduct sea

control operations to establish and maintain local maritime superiority in the AOA or operational area. The establishing authority explicitly establishes priorities in the initiating directive. The CATF and CLF resolve any conflicting requirements for mutual support during planning or seek adjudication from the establishing authority during planning.

3. Amphibious Force Organization

AFs are task-organized based on the mission. No standard organization is applicable to all situations that may be encountered in an amphibious operation. Each task force may be organized separately or several may be combined based upon operational requirements. Task organizing enables an operational commander to subdivide subordinate forces and assign authority and responsibility to plan and execute based on mission, platform capability, geography, or other issues and challenges, thus enabling a more reasonable span of control. Flexibility is essential. At the JFC's or JFMCC's discretion and as promulgated in the initiating directive and establishing directive, task forces may be combined and other forces added or deleted as dictated by operational requirements. Task designators are used by US and NATO naval forces that assign forces in a task force, task group, task unit, and task element hierarchical structure.

4. Amphibious Task Force

a. The ATF, which may consist of US and multinational forces, is task-organized according to the numerous separate but interrelated tasks required to meet the operational requirements. The CATF will be designated in the initiating directive.

For detailed information on assigning Navy commanders as CATFs, see Chief of Naval Operations Instruction 3501.316, Force Composition of Afloat Navy and Naval Groups.

b. Depending on the amphibious operation, an ATF may vary in size and can be task-organized. Forward-deployed ATFs are normally organized into ARGs with three amphibious warfare ships (an amphibious assault ship [general purpose] [LHA]/amphibious assault ship [multipurpose] [LHD], amphibious transport dock [LPD], and dock landing ship [LSD]). These ships, each with a flight deck and well deck (with the exception of LHA-6 and LHA-7), can, or will be able to, embark, deploy, and land elements of an LF in an assault by tiltrotor aircraft, helicopters, landing craft, amphibious vehicles, and by combinations of these methods. An ESG may be formed to provide additional amphibious warfare expertise and advocacy in the event of more complex operations. ESGs are prepared to provide a deployable, scalable, flag officer-led CE with task-organized naval forces to fulfill CCDR and fleet commander operational requirements. ESGs include one ARG and MEU or ATF if a MEB embarks and may be supported by other forces (e.g., surface combatants and auxiliary support vessels) based on mission and CCDR requirements.

(1) The LHD has a full-length flight deck and hangar to support helicopter, tiltrotor, and vertical/short take-off and landing aircraft. Well decks provide for ship-to-shore movement of landing craft and AAVs. The CATF and CLF and their staffs are normally embarked on these ships to control air, land, and maritime assets.

(2) The LHA has a full-length flight deck and extended hanger to support aviation facilities, but it lacks a well deck. Like the LHD, the CATF and CLF and their staffs can also embark in the LHA to control air, land, and maritime assets.

(3) The LPD supports the landing of troops, equipment, and supplies using landing craft, AAVs operating from its well deck, and helicopters and tiltrotor aircraft operating from its flight deck.

(4) The LSD supports the landing of troops, equipment, and supplies using various types of landing craft and AAVs using its well deck. It has the ability to render limited docking and repair services to small boats and craft.

(5) The LCC [amphibious command ship] functions as a command ship for a JTF, naval component commander**,** or numbered fleet commander as the command, control, communications, computers, and intelligence platform.

c. All ATFs include:

(1) The CATF and his staff.

(2) One or more amphibious warfare ships.

(3) **Control Group(s).** Personnel and ships designated to control the surface ship-to-shore movement, for example, the central control officer (CCO) and PCO.

(4) **Naval Beach Group.** A waterborne group organized to provide traffic control; shore-to-ship communications; beach and surf salvage; fuel support to the beach party, landing craft, and logistics; and ship-to-shore movement support to the CLF. Its specific organization depends on the number of beaches through which the LF will land and the size of the units using the beaches.

See Navy Tactics, Techniques, and Procedures (NTTP), 3-02.14, Naval Beach Group Operations, *for additional information on the naval beach group.*

(5) **Navy Tactical Air Control Group.** The Navy tactical air control group is an organization established to operate a Navy tactical air control center (Navy TACC) and a tactical air operations center (TAOC) for control of air operations within the AOA or operational area. Single-ship ATFs generally do not have a tactical air control group.

d. The ATF may include the following groups (not all groups will be required for every operation):

(1) **Attack Group.** An attack group is a subordinate task organization to an ATF formed for operations in widely separated landing areas. The attack group is composed of units designated to transport, protect, land, and initially support a landing group.

(2) **Movement Group(s).** Composition of these groups includes amphibious warfare ships from the AE, AFOE shipping, follow-up, and, if employed, pre-positioning forces.

(3) **Amphibious Advance Force.** The purpose of an amphibious advance force is to prepare the landing area for amphibious operations. An amphibious advance force is a temporary organization within the AF, which precedes the main body to the AOA. The JFMCC may provide forces, such as forward-deployed ARG and MEUs, MCM assets, and other forces, task-organized by the CATF and CLF as a temporary organization within the AF to form an amphibious advance force prior to the arrival of the AF into the operational area. Its function is to participate in preparing the objective for the main assault by conducting such operations as reconnaissance, seizure of supporting positions, MCM, preliminary bombardment, underwater demolitions, and air interdiction.

(4) **Surface Fire Support Group(s).** Surface combatants assigned to the ATF to provide surface fire support of the assault landings and LF operations ashore.

(5) **Screening Group.** A screening group provides protection to the ATF en route to and during operations in the AOA. Within the screening group, elements are task-organized to provide specific functions (e.g., air and missile defense, SUW, or antisubmarine warfare [ASW]) in accordance with the Navy's composite warfare commander (CWC) doctrine described in Appendix B, "Composite Warfare Doctrine."

(6) **MIW Group.** MCM ships conduct defensive MCM. The MIW group submits requests for offensive MCM actions as part of the shaping process.

(7) **Maritime Pre-Positioning Ships Squadron (MPSRON)**. An MPSRON is forward-stationed with equipment and supplies to support the standup and sustainment of a MEB. An MPSRON is comprised of a mix of dry cargo/ammunition ships; large, medium-speed RO/RO ships; and other ships.

See NTTP 3-02.3M/Marine Corps Tactical Publication (MCTP) 13-10, Maritime Prepositioning Force Operations, *for more information on prepositioning operations.*

(8) **AFOE Ships.** These ships carry the assault troops, vehicles, aircraft, equipment, and supplies that, although not needed to initiate the assault, are required to support and sustain the assault. More information on the AFOE is contained in Appendix A, "Assault Follow-On Echelon."

e. The ATF may be supported by the following groups:

(1) **CSG.** CSGs listed in the initiating directive or establishing directive may be assigned to or in support of the ATF to provide air, surface, and subsurface protection and strike warfare. They may aid in establishing the maritime and air superiority needed to conduct the amphibious operation.

(2) **MIW Group.** The same ships that could be part of the ATF could initially be part of a support force.

(3) **Theater ASW Force.** This force will clear the AOA or AO of submarine threats prior to the arrival of the ATF and then protect the ATF once they have arrived.

(4) **Logistics forces.** The combat logistics ships would supply both the ATF and the LF.

f. The CATF will exercise OPCON over the ATF. Other groups may fall under CATF OPCON as specified in the initiating directive or establishing directive. At a minimum, however, the CATF will exercise TACON of forces from each of these other groups while they are conducting operations inside the AOA.

For further details on C2 of Navy forces, see Appendix B, "Composite Warfare Doctrine;" JP 3-32, Command and Control for Joint Maritime Operations*; and NWP 3-56,* Maritime Operations at the Tactical Level of War.

5. Landing Force

a. The LF consists of ground combat units and any of its combat support and CSS units. The CLF will be designated in the initiating directive. The LF may be composed of USMC and USA forces, other US forces, and MNFs. If LF capabilities are required by the CATF, the CLF will make decisions as to the appropriate LF capabilities to be made available TACON to the CATF. If USA forces comprise part of the LF, they will be task-organized with appropriate combat and sustainment capabilities to support the LF. Army forces may provide intratheater ship-to-shore transport, to include landing craft, cargo handling, logistics, traffic control, and general engineering capabilities. When USMC forces are employed as the LF, they will be task-organized into a Marine air-ground task force (MAGTF), the Marine Corps' principal organization for missions across the range of military operations. The MAGTF is functionally grouped into four core elements: a CE, a GCE, an ACE, and a logistics combat element (LCE). The basic structure of the MAGTF never varies, but the number, size, and type of Marine Corps units comprising each of the four elements are mission-dependent.

(1) Organizations that can be assigned as LF include the Marine expeditionary force (MEF), MEB, MEU, and, in some cases, a special purpose Marine air-ground task force (SPMAGTF).

(a) **MEF.** A MEF is the largest MAGTF, the Marine Corps' principal warfighting organization, and is capable of missions across the full range of military operations. The size and composition of a deployed MEF can vary greatly depending on the requirements of the mission. A MEF is normally built around a GCE infantry division, a Marine aircraft wing, and a Marine logistics group—the largest respective Marine Corps ground, air, or logistic units. It can operate from a sea base, land base, or both and typically deploys with more than 45,000 personnel with up to 60 days of supply (DOS). The ACE consists of a Marine aircraft wing with fixed-wing, rotary-wing, and tiltrotor assets. The LCE is a combat logistics force that is organized to provide the full

range of CSS to the MEF. The MEF headquarters can serve as a JTF headquarters. When operating as part of a JTF, the MEF commander can operate as a functional component commander. MEFs are capable of self-sustained forcible entry to overcome challenges to access. It can seize and hold beachheads, airfields, and ports to enable the introduction of follow-on forces. The MEF can then remain in theater to conduct the full range of military operations in support of the joint operation or campaign.

(b) **MEB.** The MEB is a tailorable and scalable mid-sized MAGTF that is typically led by a one-star general officer. It is normally built around a GCE of a reinforced infantry regiment. The ACE consists of a Marine aircraft group with fixed-wing, rotary-wing, and tiltrotor squadrons. The LCE is a combat logistics regiment that is organized to provide the full range of CSS to the MEB. A MEB is capable of deployment and employment via amphibious warfare ships and intratheater airlift and sealift. It can operate by itself with a self-sustainment capability of 30 days. It may include up to 19,000 personnel with up to 30 DOS. The MEB can conduct forcible entry operations. The MEB is designed to aggregate with other MEBs, MEUs, and other pre-positioning force assets to fight as the MEF.

(c) **MEU.** A MEU is organized as a MAGTF with approximately 2,600 Marines and Sailors and consists of a CE, a reinforced infantry battalion, a reinforced composite aviation squadron, and a task-organized LCE (combat logistics battalion). The forward-deployed MEU is uniquely organized, trained, and equipped to provide the JFC with an expeditionary force. Typically, MEUs are deployed with up to 15 DOS operating in support of one or more GCCs across the range of military operations, either independently, as part of a larger AF, or as the lead element of a follow-on MAGTF or joint or combined force. Its expeditionary warfare capabilities make it extremely useful for limited contingency operations involving amphibious assaults or amphibious raids, for AF support to crisis response and other operations (such as NEO; FHA; embassy reinforcement; and visit, board, search, and seizure), and for acting as part of an amphibious advance force.

(d) **SPMAGTF.** When situations arise for which a MEU or other unit is either inappropriate or unavailable, a SPMAGTF is formed. A SPMAGTF may be of any size, but normally no larger than a MEU, with tailored capabilities required for accomplishing a particular mission. It may be task-organized from non-deployed Marine Corps forces or formed on a contingency basis from a portion of a deployed MAGTF. Frequently, SPMAGTFs conduct sea-based security cooperation activities, while others have been formed to provide sea-based FHA or military support to civil authorities or to participate in freedom of navigation operations.

(2) Forces or elements from the LF may be task-organized as part of an amphibious advance force. Forward-deployed MEUs and Army forces may, for example, become part of an amphibious advance force to help shape the operational environment prior to the arrival of the AF into the AOA or AO.

6. Other Forces

Amphibious operations are often supported by other forces that are not part of the ATF or LF. These forces will serve for specific tasks, such as defending the amphibious advance force, protecting the AF, USAF supporting the assault breaching mission, or shaping the operational environment. Supporting naval (such as a CSG) and air resources, as well as SOF, are assigned by the JFC or appropriate component commander to support the mission of the AF during the amphibious operation. The support request may be originated by the CATF or CLF. The initiating directive should provide the relationships of these forces with the AF. The CATF or CLF will exercise coordination and control, as prescribed in the initiating directive, over forces not a part of the AF when such forces are operating within the AOA after the arrival of the amphibious advance force or the main body. When such forces are merely passing through the AOA, control will be exercised only to the extent of preventing or minimizing mutual interference or for force protection purposes. Maritime SOF, which includes naval special warfare forces and Marine Corps SOF, may be employed in support of an amphibious operation as part of the amphibious advance force or conducting other supporting operations. ARGs and MEUs may be augmented by a special operations force liaison element to improve coordination with the global SOF network and facilitate interdependent ARG and MEU and SOF operations, actions, and activities.

For more information on special operations, see JP 3-05, Special Operations.

7. Operational Areas

a. Amphibious operations normally require a three-dimensional geographic area, within which the AF's objective(s) is located. JFCs employ various maneuver and movement control and FSCMs to define operational areas for land and maritime forces and to facilitate effective joint operations. These measures include boundaries, phase lines, objectives, coordinating altitudes to deconflict air operations, air defense areas and zones, AOAs, submarine operating patrol areas, and minefields. Within the designated operational area, the designated commander synchronizes maneuver, fires, and interdiction. The operational areas that may be assigned to an AF in an initiating directive are an AOA or an AO normally in conjunction with a high-density airspace control zone (HIDACZ). An AOA is normally established by the JFC for amphibious operations, and air control procedures are identical to HIDACZ procedures. The JFC must notify all commanders that an AOA or AO has been established, as their operational areas may be affected, as well as their ability to operate in the AOA. The JFC considerations prior to establishing an AOA or AO include:

(1) Coastal defense cruise missile threats.

(2) Submarine threats.

(3) Maritime mine threats.

(4) Requirements for local air and maritime superiority.

(5) Requirements for intelligence assets.

(6) Requirements for airspace deconfliction procedures.

(7) Requirement and availability of defensive joint electromagnetic spectrum operations (JEMSO) to protect the AF from physical attack and defend friendly electromagnetic spectrum (EMS) capabilities.

b. **AOA.** An AOA is a geographical area (delineated for C2 purposes in the initiating directive) wherein the AF objective(s) are located. This area should be of sufficient size for conducting necessary maritime, air, and land operations in direct support of the amphibious operation but not be so large as to be beyond the CATF's control capability or ability to defend. The AOA is three dimensional to include the waters below and the airspace above. Due to joint/combined air and air control capabilities both within and adjacent to the AF, the AOA (or AO with HIDACZ) vertical dimension may be limited in altitude. Maximum operational vertical ranges of fires, both NSFS and land-based; types and tasks of aircraft supporting the LF; and enemy antiair capabilities should be taken into account when determining a suitable vertical limitation to an AOA. AOA dimensions may change during the course of an operation; however, any changes should be preplanned as much as possible in close coordination with adjacent commanders' AOs.

c. **AO.** An AO is an operational area defined by the JFC for land and maritime forces and should be large enough for component commanders to accomplish their missions and protect their forces. Within the AO, the JFC specifies maritime (surface and subsurface) and air defensive areas, in addition to the HIDACZ, used for air control measures. The JFC may establish an AO with HIDACZ instead of an AOA if the CATF and CLF do not possess the resources to C2 and defend all activity within the objective area.

For additional guidance on boundaries and synchronization of joint efforts within land and maritime AOs, refer to JP 3-0, Joint Operations.

d. **Disestablishment of Operational Areas.** The operational area is not necessarily dissolved upon termination of the amphibious operation. It may be required for the sustainment of follow-on forces or to support other missions as assigned. As with its establishment, disestablishing the operational area is the decision of the establishing authority (with CATF or CLF recommendations) and should be delineated in the initiating directive or in follow-on orders.

SECTION B. COMMAND AND CONTROL OF SURFACE AND UNDERSEA OPERATIONS

8. Composite Warfare

a. The composite warfare organization enables offensive and defensive combat operations against multiple targets and threats simultaneously. Flexibility of implementation, reinforced by clear guidance to subordinates, and use of mission command and command by negation are keys to decentralized control of the tactical force. The officer in tactical command (OTC) may implement a composite warfare organization

whenever and to whatever extent required, depending upon the composition and mission of the force and the capabilities of the adversary. The OTC controls CWC and subordinate warfare commander actions through command by negation. Allied maritime procedures and instructions use the term *command by veto* to mean the same thing. Command by negation acknowledges, that in many aspects of often distributed and dispersed maritime warfare, it is necessary to pre-plan the actions of a force to an assessed threat and delegate some warfare functions to subordinate commanders.

b. The OTC and/or CWC may choose to activate all commanders and coordinators or activate only a few of them. The composite warfare construct allows the OTC to assign some or all of the command functions associated with mission areas to warfare commanders, functional group commanders, and coordinators, thus supporting decentralized execution.

c. There are three tiers of the composite warfare structure: warfare commanders, functional group commanders, and coordinators. They are differentiated from each other by their focus and the command functions they exercise over assets in the force.

(1) Warfare commanders are usually established for extended periods of time and normally impact all forces in the composite warfare organization. The warfare commanders are: air and missile defense commander (AMDC), information operations warfare commander, ASW commander, surface warfare commander (SUWC), and strike warfare commander.

(2) Functional group commanders are usually established to perform designated command functions that are generally more limited in scope and duration than warfare commanders and impact only a segment of the force. Functional group commanders include the mine warfare commander (MIWC) and ballistic missile defense commander,

(3) Coordinators execute the policies of the OTC and/or CWC in managing assigned resources; they do not initiate autonomous actions nor do they normally exercise TACON. Coordinators include the air resource element coordinator and helicopter element coordinator.

For additional information on composite warfare, see Appendix B, "Composite Warfare Doctrine," and NWP 3-56, Composite Warfare: Maritime Operations at the Tactical Level of War.

9. Command and Control of Surface Forces

The sea combat commander, when assigned, plans, directs, monitors, and assesses SUW and ASW tasks to protect the force from surface and subsurface threats during AF movement to the AOA and as the LF transitions to and from the landing area. If a sea combat commander is not assigned, the duties may be assigned to separate SUW and ASW commanders. The MIWC has similar responsibility for threats from naval mines. The OTC determines who will be assigned to these positions; the duties may be assigned to commanders supporting but not part of the AF. The SUWC protects the force against surface threats. The SUWC collects, evaluates, and disseminates SUW surveillance

information and plans and manages the employment of SUW forces. SUW forces include air, surface, and subsurface naval and assigned joint operational elements that are capable of executing SUW tasks. USN ships are multi-mission and may be assigned primary missions other than SUW. Other joint force assets may be tasked to participate in the SUW mission and may function in both supported and supporting roles.

For more information on SUW operations, see NWP 3-20, Navy Surface Warfare Manual.

10. Command and Control of Antisubmarine Warfare Forces

a. ASW missions will be centrally planned, typically under the direction of the JFMCC or a Navy component commander, and executed in a decentralized manner in support of the JFC's CONOPS. ASW requires the coordination and integration of multiple platforms and systems in the theater to mitigate the risks posed by enemy submarines.

b. The theater ASW commander is normally designated as a task force or task group commander subordinate to a Navy component commander or JFMCC. The theater ASW commander supports other maritime commanders (e.g., CATF) in the conduct of tactical ASW to defend the AF and typically provides ASW support to afloat forces as they transit through the joint operations area (JOA) and while they operate in the AOA.

For more information on ASW, see NTTP 3-21.1, Antisubmarine Warfare Commander's Manual.

11. Command and Control of Naval Mine Warfare Forces

a. Naval MIW in support of amphibious operations includes both the employment of naval mines by friendly forces and the use of air, surface, and underwater platforms to conduct MCM and remove or reduce the enemy mine threat to friendly AF. The MIWC is responsible for all aspects of MIW. The mine countermeasures commander (MCMC) is responsible for all MCM forces and is usually subordinate to the MIWC. Normally, both of these commanders will be assigned to support amphibious operations. However, in smaller-scale operations, or where the use of friendly mines is not anticipated, the MCMC can also act as the MIWC.

b. Often, MIW operations will be required preparatory to amphibious operations, during the execution of those amphibious operations, and continuing after the amphibious operations are complete. During preparations for amphibious operations, the MIWC will usually be a subordinate commander to the JFMCC or JFC. Since any anticipated employment of friendly mines may use air assets, close liaison will be required between the MIWC, JFMCC, and joint force air component commander (JFACC).

c. The CATF has overall responsibility for MIW within the maritime areas of the AOA. The MIWC and MCMC will act as supporting commanders to the CATF and normally exercise OPCON of Navy MCM forces. During the planning process, a line of demarcation boundary will be determined for the transition of responsibility between the CATF and CLF for MCM in the AOA. Seaward of this line of demarcation, the CATF—

supported by MIWC and MCMC—will be responsible for MCM on the beach, in the surf zone (SZ), and at sea.

Additional discussion of the fundamentals of MIW C2 and its role in support of amphibious operations can be found in JP 3-15, Barriers, Obstacles, and Mine Warfare for Joint Operations*; NWP 3-15 (Vols. I and II)/MCTP 13-10J,* Naval Mine Warfare; *and NTTP 3-15.24/MCRP 13-10J.1,* Mine Countermeasures in Support of Amphibious Operations.

12. Command and Control of Surface Ship-to-Shore Movement

a. The relationships and authorities for the CATF, CLF, and commanders of other forces assigned to the AF during ship-to-shore movement are established in the initiating directive. Responsibilities for ship-to-shore movement include:

(1) The CATF, in close coordination with the CLF, prepares the overall ship-to-shore movement and landing plans. During the execution of the amphibious operation, the CATF is overall responsible for ship-to-shore movement but will coordinate with the CLF to adjust for changing situations that affect the amphibious operation as revealed by intelligence sources or forces ashore. The CATF is responsible for debarkation and ship-to-shore movement until termination of the amphibious operation. At that time, responsibility for the off-load of follow-on forces, follow-up shipping, and logistics over-the-shore (LOTS) operations may be passed to another organization as designated by higher authority. In the case of an amphibious assault, the operation will normally be terminated only after the entire AFOE is ashore.

(2) The Navy control group keeps the CATF, CLF, and other designated commanders informed of the progress of the surface movement from ship-to-shore, including the actual landing of the waves and the visible progress of operations ashore. A control group consists of personnel, ships, and craft designated to control the waterborne ship-to-shore movement. The CATF and transport group commanders designate control ships and control officers, as appropriate. The organization of the Navy control group is based on the arrangement and number of landing beaches used by the AF and is specifically designed to support the LF's organization for landing. The Navy control group uses control measures, such as approach lanes and boat lanes, to facilitate control of movement. The primary agencies of the Navy control group include the following:

(a) **CCO.** This Navy officer is normally located aboard the CATF's flagship to coordinate all surface ship-to-shore movement. If there is only one colored beach, there is no need for a CCO and thus, the PCO will work directly for the CATF. The CCO:

1. Plans and supervises the surface ship-to-shore movement.

2. Organizes the Navy control group to best support the landing plan.

3. Maintains liaison with the Navy TACC watch officer.

4. Maintains liaison with the TACLOG group.

(b) **PCO.** The PCO is embarked in a primary control ship assigned to control the movement of the landing craft and amphibious vehicles. A PCO is assigned for each colored landing beach to:

1. Provide detailed plans, called primary control ship intentions message, to conduct the ship-to-shore movement for amphibious operations across a colored beach no later than 48 hours prior to the activity.

2. Coordinate landing craft operations within a designated area following the initial action.

3. Maintain the current location and status of ships, landing craft, and boats assigned to conduct a landing on a colored beach.

4. Monitor surf and weather conditions and recommend the termination of boat operations should conditions warrant.

5. Maintain the status of debarkation or embarkation.

6. Land scheduled waves at the colored beach at the specified time.

7. Arrange for fueling boats and provide rest and food for boat crews.

8. Provide liaison to the surface-borne TACLOG group detachment.

9. Conduct landing craft or amphibious vehicle salvage operations.

(c) **Secondary Control Officer.** When designated, the secondary control officer embarks in the secondary control ship and is the principal assistant to the PCO. The secondary control officer's primary duty is to assume PCO duties in an emergency or if the PCO has to go off-station. The secondary control officer will maintain duplicate control records and plots required of the PCO and monitor PCO radio circuits.

Detailed description and use of these control measures can be found in NTTP 3-02.1M/ MCTP 13-10E, Ship-to-Shore Movement.

(3) The CLF determines LF requirements for the ship-to-shore movement and presents them to the CATF. The CLF provides information on the availability of organic assets (airborne and amphibious vehicles) to the CATF and prepares the documents contained in the LF landing plan.

(4) The commanders of other forces assigned to the AF (including those assigned for movement to the operational area for tasks not part of the amphibious operation) present their requirements to the CATF.

b. Ship-to-shore movement should be synchronized with those agencies providing secure routes to the beach or LZ to provide appropriate cover without placing the units conducting the operation at undue risk during this vulnerable period.

"The doctrine and performance of marines and airmen matured in Pacific campaigns as the hesitancy and missteps of Guadalcanal, New Guinea, and Tarawa were heeded. Coordinated amphibious assault and air warfare became irrepressible."

"Struggle for the Marianas," Captain Bernard D. Cole, US Navy, 1995

c. Organizations and agencies may be established to support the ship-to-shore movement plan. These organizations and agencies (i.e., terminal service battalion, amphibious construction battalion, or cargo handling and port group units) may be required to support the off-load of merchant ships.

SECTION C. COMMAND AND CONTROL OF AIR OPERATIONS

13. Joint Air Operations

a. Joint air operations in support of the AF are performed with air capabilities and forces made available by components in support of the JFC's or AF's objectives. To create synergy and avoid duplication of effort, the JFC synchronizes and integrates the actions of assigned, attached, and supporting capabilities and forces in time, space, and purpose. The JFC may accomplish this in the air through designation of a JFACC, area air defense commander (AADC), and ACA for the JOA. If established, the JFACC uses joint air to support amphibious operations within the AOA, as required, through coordination with the JFMCC. Air operations conducted within the AOA are controlled by the ATF and/or LF air staff as designated.

b. When the JFC establishes an AOA within the JOA, the supported commander is responsible for all actions within the AOA. Any joint air operations that support operations in the AOA or would have an impact on operations in the AOA should be controlled by, or coordinated with, the CATF.

c. The JFACC staff will create an air operations directive to promulgate guidance for each air tasking order (ATO) and the successive planning steps for the JOA. This order is then issued to the joint air operations center for execution. Beyond the AF's organic air requirements, AF air planners support the ATO and the air operations directive with excess sorties passed to the establishing authority for tasking. Likewise, the air operations directive is used to deconflict and coordinate organic sorties and by the theater air control system for overall control of AF assets.

For more information, see JP 3-30, Command and Control of Joint Air Operations.

14. Defensive Counterair

a. The AADC bears overall responsibility for air defense activities of the joint force, to include defense from missile threats. The AADC may designate subordinate regional air defense commanders (RADCs) for specific geographic regions to accomplish the joint force mission. Additionally, sector air defense commanders (SADCs) may be designated within and subordinate to RADCs. An RADC is normally established within the ATF

organization and is responsible for the airspace allocated for amphibious operations, including, but not limited to, the AOA (if established). The CATF coordinates joint air requirements in support of active defense plans and procedures with the AADC. The CATF usually assigns an AMDC, normally located on the most capable air defense platform, to carry out air and missile defense operations. The AMDC may be assigned as the RADC by the CWC. The AMDC coordinates with the Navy TACC to maintain a current air picture.

b. When an AOA is established, the airspace assigned to the AF usually includes a margin of airspace surrounding the AOA called the amphibious defense zone (ADZ). An ADZ is the area encompassing the AOA and the adjoining airspace required by accompanying naval forces for the purpose of air defense. The actual size and shape of an ADZ is dependent on the capabilities of air defense platforms assigned to the CATF; the size of the AOA; and agreement between the AF's RADC, the AADC, and adjacent AMDCs. Within the ADZ, the appropriate AF air defense commander (RADC, SADC) maintains positive identification of all aircraft and conducts air defense with the authority to engage in accordance with established ROE and AADC established procedures.

c. **Planning Considerations**

(1) A coherent air defense plan requires commanders to conduct coordinated planning with all supporting and adjacent commanders and the JFC to establish a robust C2 arrangement. Effective air defense operations require a control system that functions despite a high volume of friendly aircraft operations within the operational area and the difficult overland target detection environment present in amphibious operations.

(2) The area air defense plan is written with detailed engagement procedures that are consistent with the airspace control plan (ACP) and operations in the AOA. The geographic arrangement of weapons and the location of specific types of air defense operations, as well as specific procedures for identification of aircraft, are important factors to include in planning.

(3) The designated commander will request the airspace coordinating measures (ACMs) to be included in the establishing directive (for a support relationship) or CONOPS.

Refer to JP 3-01, Countering Air and Missile Threats, *for additional information.*

15. Airspace Control in Amphibious Operations

a. Assignment of airspace enables the JFC to exercise C2 of forces and deconflict high volumes of different types of aircraft and missiles. During amphibious operations, the ACA will normally further delegate the control authority for a specific airspace control area to the CATF**.** The complexity and size of an amphibious operation directly impacts the amount of airspace allocated. Airspace requirements, to include a defined ceiling for C2 of amphibious operations, should be established in coordination with the JFACC to

clearly delineate responsibilities in and around the AOA/AO and still support missions performed by the JFACC.

See JP 3-52, Joint Airspace Control*, for further information on control authority designation.*

b. An AOA and AO include airspace in which there may be a concentrated number of airspace users and varied weapons such as artillery, missiles, and NSFS. This airspace has defined dimensions that usually coincide with specific geographical features or navigational aids. Access to AOA airspace or HIDACZ (used when an AO is assigned) is controlled by the Navy TACC. These airspace control measures are typically initiated by the CATF as the primary user. The ACA approves these measures on behalf of the JFC.

c. The level of air control allocated to the AF depends on the ACM required for the operation. Considerations for establishing this airspace include:

(1) Airspace control capabilities of the AF.

(2) Entry and exit routes and procedures into and out of the AOA or HIDACZ and to the target area.

(3) Air traffic advisory as required. Procedures and systems should be considered for air traffic control service during instrument meteorological conditions.

(4) Procedures for expeditious movement of aircraft into and out of the AOA or a HIDACZ.

(5) Coordination of fire support (to include assault breaching missions), as well as air defense weapons control orders or status within and in the vicinity of the AOA or HIDACZ.

(6) Range and type of NSFS available.

(7) Location of enemy forces inside, and in close proximity to, the AOA or HIDACZ.

(8) At a minimum, the AOA or HIDACZ should cover the ATF's landing area and extend inland to the LF's objectives, which may be beyond the fire support coordination line. Additionally, the AOA or HIDACZ should be large enough to accommodate the flow of aircraft into and out of the amphibious operations airspace.

(9) Range and maximum ordinate of joint force ground-based artillery, rocket, and mortar systems.

d. Under the ATF, the Navy TACC, typically onboard the amphibious flagship, controls all air operations within the allocated airspace regardless of mission or origin to include supporting arms and assault breaching. Regardless of where actual airspace control is exercised, close and continuous coordination between airspace control and air defense

agencies is essential. Emphasis will be placed on simple, flexible air traffic control plans. AFs operating in a non-radar environment will rely exclusively on procedural control. Amphibious ACPs employ a combination of positive and procedural control methods.

(1) **Positive Airspace Control.** Positive airspace control uses radar; EW support; identification, friend or foe; selective identification feature; visual means; digital data links; and elements of the air defense network communications system to positively identify, track, and direct air assets.

(2) **Procedural Airspace Control.** Procedural controls supplement those methods utilized in positive airspace control. Procedural control will be used when electronic or visual identification, tracking, or communication means are unavailable or inadequate to provide positive airspace control. Procedural airspace control relies on a combination of previously agreed on and promulgated orders and procedures.

e. To facilitate unity of effort and minimize interference along adjacent boundaries, the AF air control agency coordinates the items listed in Figure III-2 with the ACA. The JFMCC may be designated the control authority for a specific airspace control area or sector for the accomplishment of a specific mission and can thus establish ACMs in the AOA without further coordination. Assignment of airspace enables the JFC to exercise C2 of forces, deconflict high volumes of aircraft and missiles, and defend forces. During amphibious operations, the JFMCC or CATF is normally designated as the control authority. The complexity and size of an amphibious operation directly determines the amount of airspace allocated. The level of airspace control allocated to the AF depends on the type of ACM approved for the operation. If an AOA is established, air control procedures are identical to HIDACZ procedures. If only an AO is established, the supported AF commander will normally request that the ACA establish a HIDACZ over this geographic area. A HIDACZ is airspace designated in an ACP or airspace control order (ACO) in which there is a concentrated employment of numerous and varied weapons and airspace users. Access is normally controlled by the CATF or CLF, who can direct a more restrictive weapons status within the designated area. For air defense, the ADZ includes the AOA plus a buffer zone so the incoming threat can be engaged before it crosses into the AOA. The ACP provides the basic information needed to operate within the AOA or HIDACZ. Changes to established procedures will be coordinated with all airspace users.

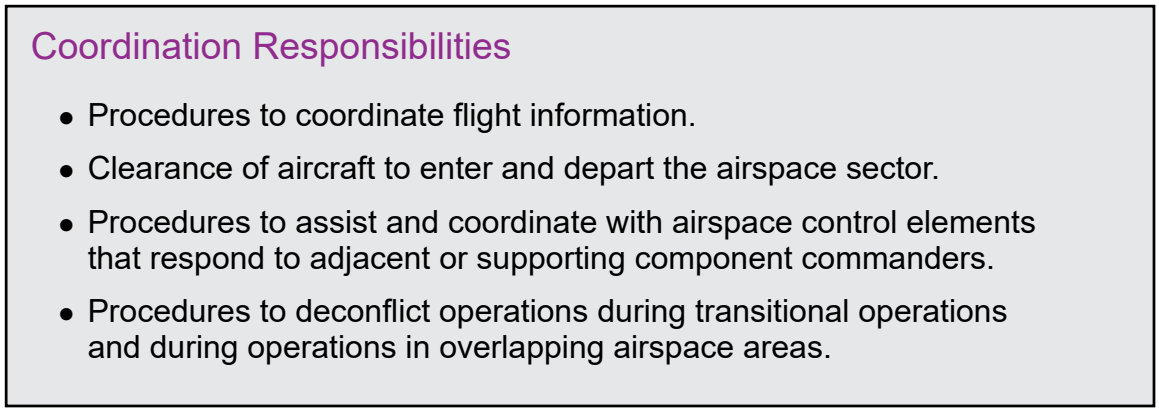


Figure III-2. Coordination Responsibilities

The ACO and SPINS to the ATO may contain changes to airspace control procedures and should be reviewed daily by all users of amphibious airspace.

16. Navy Tactical Air Control Center

The Navy TACC is the senior Navy amphibious air control agency. The functions of the Navy TACC may be spread across several ships. The Navy TACC coordinates the types of ACMs and controls all air operations within the operational area for the duration of the operation or until an air control agency is established ashore. Once a land-based air control agency receives control of all LF air operations, the Navy TACC may become a tactical air direction center (TADC) supporting the land-based air control agency. The Navy TACC has five sections.

a. **Air Traffic Control Section (ATCS).** The ATCS is located in the Navy TACC and provides initial safe passage, radar control, and surveillance for close air support (CAS) aircraft and all other aircraft entering, operating within, or traversing the amphibious airspace, to include those not assigned to the AF. It coordinates search and rescue operations and can provide early detection, identification, and warning of aircraft. The ATCS also controls and routes rotary-wing CAS aircraft and assault support aircraft and coordinates with the AATCC onboard the large-deck amphibious warfare ship(s) during amphibious operations. In amphibious operations, the AATCC is the primary direct control agency for the helicopter and tiltrotor aircraft group/unit commanders operating under the overall control of the Navy TACC. The AATCC also coordinates rotary-wing operations for:

The air traffic control section provides initial safe passage, radar control, and surveillance for close air support aircraft in the operational area.

(1) Assault support requests,

(2) Ship-to-shore movements, and

(3) Conflict resolution in rotary-wing tasking.

b. **Air Support Control Section (ASCS).** The ASCS provides quick reaction to satisfy requests from the LF for CAS. It is located in the SACC and is the section of the Navy TACC designated to coordinate, control, and integrate all direct support aircraft (i.e., CAS) and assault support operations (including assault breaching). The SACC is a single location on board an LHA or LHD in which all communication facilities required for the coordination of fire support from artillery, air, and NSFS are centralized. This is the Navy counterpart to the Marine fire support coordination center (FSCC) utilized by the LF.

c. **Air Defense Coordination Section (ADCS).** The ADCS, located in the Navy TACC, provides early detection, identification, and warning of enemy aircraft and, through liaison with the air defense commanders, receives missile warning information. The ADCS provides the CATF and CLF (until the CLF establishes an SADC or RADC) an oversight and coordination staff for the conduct of offensive and defensive air defense.

d. **Plans Section.** The plans section participates in the targeting board as air operations subject matter experts. The section forwards excess air sorties and air support requests to the establishing authority for tasking and allocation. The input from the targeting board is processed by the ATO planning, production, and execution cell. This section normally produces the following amphibious products: the ACO, the ATO, SPINS, and additional fire support asset requests. If the Navy TACC is acting as the joint air operations center for an enabling JFACC, the plans section may be required to produce the air apportionment recommendation for the JFC.

e. **Passenger, Mail, and Cargo (PMC) Section.** The PMC conducts future planning and coordinates, produces, and distributes the airborne portion of the PMC plan. The PMC officer is in charge of the PMC section and works closely with the amphibious squadron material officer to liaise with all ship's supply, ship's combat cargo, MEU supply, MEU combat cargo, and amphibious squadron combat cargo officers in the ATF to identify air PMC requirements and PMC assets. The PMC officer co-chairs the PMC board with the amphibious squadron material officer and acts as a contributing member of the air planning board.

17. Air Ship-to-Shore Movement

Aircraft units employed in the air ship-to-shore movement are subordinate elements of the LF. Plans include provisions for shifting control of aircraft operations to the CLF when the situation ashore permits. During the ship-to-shore movement, the CATF coordinates and controls air operations through the Navy TACC. The tactical air officer (TAO) plans and conducts the airborne operations in coordination with the LF. The Navy TACC watch officer, who is the senior watch officer in the Navy TACC, is responsible to the TAO for control of air operations in support of the LF. Therefore, within the Navy TACC, the air ship-to-shore movement is controlled by the Navy TACC watch officer, and

the ATCS will control all flights into the LZs. The TAO and CCO should coordinate respective ship-to-shore movement plans. If the operation does not require a TAO, then the ATCS will work directly for the CATF. Control of air ship-to-shore movement is further delegated to the AATCC. Once established ashore, the CLF coordinates and controls air operations through the Marine TACC, if stood up; otherwise, the Marine direct air support center (DASC) may provide procedural control under the supervision of the Navy TACC.

18. Marine Corps Tactical Air Command Center

a. The Marine TACC, when established ashore, provides the facilities for the ACE commander and staff to conduct air operations. If the ACE is afloat, the Marine TACC may be incrementally phased ashore. Initially, a Marine TADC is established ashore, subordinate to the Navy TACC, and is responsible for air operations in the landward sector of the operational area. On completion of its build-up and when airspace management functions are passed from afloat to ashore, the Marine TADC assumes the title and responsibilities of the Marine TACC. The Navy TACC may then become a TADC, in support of the Marine TACC if the AOA or AO with HIDACZ is still established. Otherwise, the Navy TACC would control the air over the water, while the Marine TACC would control the air over the land. Initially, the Marine TACC would generally use procedural control while the Navy TACC would continue to rely on positive control, which includes radar and identification, friend or foe transponder.

b. **DASC.** The DASC is an organization within the Marine air C2 system that serves as the central coordination point for all direct support air requests. Based on the tactical situation, the DASC is normally located with the senior of the GCE, either the FSCC or the MAGTF force fires coordination center (FFCC)/fires and effects coordination center. The DASC assigns direct air support aircraft to terminal control agencies, provides aircraft ingress and egress route instructions, and disseminates advisory information. When control is afloat, the Navy TACC supervises the DASC's operations. When control is ashore, the Marine TADC or Marine TACC supervises the DASC's operations. The DASC is normally the first major LF air control agency to come ashore, typically landing about the same time as the FSCC.

c. **TAOC.** The TAOC is the ACE commander's principal air defense agency for conducting surveillance, airspace control, tactical air battle management, and air and missile defense. It also provides safe passage, radar control, and surveillance for CAS aircraft en route to and from target areas. Until the Marine TADC or Marine TACC is established ashore, the TAOC normally reports to the Navy TACC. The TAOC, or elements thereof, typically deploy with the land elements of a MEB or MEF. The TAOC's capabilities incrementally increase as the size of the land force component increases.

19. Transition from Tactical Air Control Center to Tactical Air Command Center

a. Both the Navy and the Marine Corps air control systems are capable of independent operations; however, in the conduct of an amphibious operation, elements of both systems are used to different degrees from the beginning of the operation until the

control is phased ashore. In some cases, it might be neither necessary nor desirable to transfer authority ashore. Under the CATF, the Navy TACC will control all air operations, to include supporting arms, regardless of mission or origin within the AOA or HIDACZ.

b. As the amphibious operation proceeds, C2 of aviation operations may either be transitioned ashore as Marine air C2 is established on the ground or remain afloat, dependent upon the situation and the desires of the CLF. As the operation progresses, the CLF, having the capability to control air operations, may establish C2 systems ashore and then incrementally accept responsibility for various C2 functions from the CATF. When full capability is achieved, the CLF may assume full air control responsibility from the CATF. Air C2 functions may be sequenced in five phases:

(1) Phase one is characterized by the arrival of various supporting arms controllers ashore, namely the tactical air control party (TACP), forward observers, air support liaison teams, and NSFS spot teams.

(2) In phase two, the DASC is normally the first principal air control agency established ashore. When control is afloat, the Navy TACC supervises the DASC's operations.

(3) In phase three, the TAOC moves ashore.

(4) In phase four, the senior organization of the Marine air control group is established ashore and functions as the Marine TADC under control of the Navy TACC.

(5) Phase five is characterized by the passage of command responsibility ashore. The Marine Corps TADC assumes the role of the Marine TACC. Once the Marine TACC receives control of all LF air operations, the Navy TACC may become the TADC supporting the land-based air control agency. The CATF will normally be assigned RADC or SADC responsibility for the seaward sector of the operational area.

See NTTP 3-02.1.3, Amphibious/Expeditionary Operations Air Control*, for more details.*

20. Air Command and Control Procedures and Coordination

The air C2 procedures described below are frequently associated with an established AOA or operational area.

a. **Pre-D-Day Operations.** Prior to the commencement of amphibious operations, airspace control and air defense operations throughout the operational area will be the direct responsibility of the ACA and AADC, respectively, as designated by the JFC. Control is exercised through the designated air control agency. Subordinate TADCs, as designated, monitor air control circuits in readiness to assume all or part of the duties of the air control agency.

b. **Amphibious Advance Forces.** If amphibious advance force operations are conducted in the AOA or operational area, the designated commander normally exercises air C2 through an amphibious advance force commander. The amphibious advance force

commander controls air operations in the designated area through an air control agency tailored and trained for the mission. The CATF typically assumes responsibility for local airspace control and air defense operations on arrival of the AF in the AOA or operational area.

c. **Control of Attack Groups.** The CATF normally delegates authority for control of airspace and air operations in the immediate area surrounding the respective landing areas to each attack group commander. The attack group commander exercises control through a local air control and defense agency consisting of airborne elements, an escorting surface combatant, or a TADC on the appropriate attack group ship. Overall direction of air operations as they apply to the amphibious mission is normally retained by the CATF and exercised through the designated air control agency.

d. **Air Tasking.** The CATF and CLF coordinate the air support requirements for the AF through the preparation of an air allocation request. An air allocation request message provides, among other things, the vehicle to identify unfilled air requirements.

For more information, see JP 3-30, Command and Control of Joint Air Operations.

e. **Termination of the Amphibious Operation.** On termination of the amphibious operation, air control and defense responsibilities in the area are passed to the appropriate commander in accordance with the establishing authority's guidance.

SECTION D. COMMAND AND CONTROL OF OPERATIONS ASHORE

21. Overview

a. The CLF is responsible for the overall execution of LF operations ashore. C2 systems and procedures should be flexible enough to provide support to the LF while afloat, while ashore in an austere expeditionary environment, and during transition from ship-to-shore. Communications connectivity and C2 interoperability may be required within and between the JTF headquarters, the Marine Corps or Army component commanders, and any designated functional component commanders. In multinational operations, connectivity and interoperability are also required with allied and coalition forces for C2. Finally, in AF support to crisis response and other operations, connectivity and C2 interoperability may be required for interaction and coordination with interagency representatives, local government agencies, and international organizations.

b. The mission of the CE or headquarters is to C2, direct, plan, and coordinate the air, ground, logistics, intelligence, and communications and information systems operations of the LF. Designation of supported-supporting elements may change over the course of an operation. For example, when the LF is conducting long-range battlespace shaping operations, ACE or aviation units may be the main effort of the LF, and thus the supported element.

c. The LF may potentially transfer from the JFMCC to the JFLCC as the operation progresses; however, the CATF and CLF supporting relationship may remain with the amphibious warfare ships acting as a sea base. Thorough consideration should be made on

the JFLCC's ability to provide the necessary C2 and sustainment for the LF before an OPCON shift occurs. An example of this is Task Force-58 during Operation ENDURING FREEDOM in which the ATF remained under the JFMCC and the LF transitioned to the JFLCC after land operations in Afghanistan commenced.

d. LF control organizations, which may be temporary and situational-dependent, formed to support amphibious operations, include: the TACLOG group and the LFSP for ship-to-shore movement, the beach operations group (BOG), the port operations group (POG) and the arrival airfield control group (AACG), and the Marine TACC.

22. Landing Force Organizational Shifts

a. As an amphibious operation unfolds, the LF will undergo a series of organizational shifts to meet the requirements associated with embarkation for seaborne movement, vertical and surface maneuver throughout the littoral, and the conduct of operations ashore to accomplish the LF mission. Reverse planning is normally employed in preparation for these shifts, with the organization for the LF mission ashore (or in the case of routinely deployed AFs, likely missions) informing organization for landing and organization for embarkation. This planning is both iterative and detailed. Amphibious operations that involve AFs already forward-deployed may require substantial adjustments to how forces were previously embarked and organized for landing.

b. The organizational shifts for the LF are as follows:

(1) **Organization for LF Mission(s) Ashore.** The CLF will organize combat, combat support, and CSS forces in accordance with the CONOPS to accomplish the LF mission. (For some missions, this may more accurately be described as the "organization for combat.") This organization is informed by the overall AF CONOPS, especially with regard to what C2, aviation, and logistics functions might be retained afloat, as well as a determination on whether or not to establish a floating reserve.

(2) **Organization for Landing.** The CLF will normally organize ground units into company landing teams, battalion landing teams (BLTs), or regimental landing teams (RLTs) to maneuver through the littoral by various vertical and surface means. Subordinate ground unit commanders will further organize their units as needed for embarkation in assigned aircraft, landing craft, or amphibious vehicles. Notionally, it would appear desirable that the organization for landing mirror the organization for the LF mission. In all but the smallest-scale operations, however, such alignment is unlikely for a number of reasons. Troops projected inland via helicopters or tiltrotor aircraft may require surface-landed vehicles for subsequent ground maneuver. Key resources, such as crew-served weapons and communications equipment, are normally spread-loaded to ensure loss of a single platform does not equate to a complete loss of particular capability. Individuals or small units may be attached to a team only for landing and, once ashore, detach to perform their specialized tasks. Sound planning, well-established unit standard operating procedures, and effective rehearsals are essential to ensuring landing teams can rapidly transition into the organization for the LF mission.

(3) **Organization for Embarkation.** Based on information provided by the CATF about the available ships, the CLF determines the organization for embarkation. The CLF is normally embarked on the flagship with the CATF to promote effective coordination during subsequent phases of the operation. Similarly, for larger operations, subordinate echelons within the LF are embarked in the corresponding groups and squadrons of the ATF, with subordinate commanders within the LF embarked on the same ships as their opposite numbers from the ATF. Just as key resources are spread-loaded in the organization for landing, the same principle applies to the organization for embarkation. Even if the organization for the LF mission calls for them to be employed in larger formations, units with a high equipment density, such as artillery, armor, and light armored reconnaissance, will normally be sub-divided into smaller elements and assigned to RLTs and BLTs for embarkation and landing. This is done so the loss of a single ship does not result in catastrophic loss of LF capability.

For more information, see Chapter V, "Embarkation, Rehearsal, and Movement," Section A, "Embarkation Phase," and MCTP 13-10M, Amphibious Embarkation.

23. Landing Force Command and Control Execution

a. **Sea-based C2.** C2 may remain afloat and not transfer ashore based on the type and scope of the amphibious operation. Forward-deployed MEUs conducting small-scale operations routinely exercise C2 afloat. In many areas, including fire support coordination, communications, and intelligence, ATF and LF staffs may be integrated. To exercise C2 afloat, LF C2 should operate as an integral part of an overall naval C2 architecture. LF tactical information systems should be fully integrated aboard ship with both local area network connectivity and broadband multichannel ship-to-ship and ship-to-shore communications connectivity. When afloat, the CLF and staff plan, direct, and monitor the LF actions from the landing force operations center (LFOC) on the ATF's flagship. The LFOC is the shipboard space that has been specifically designed and allocated to CLF and the LF staff for planning and executing an amphibious operation. The LFOC provides situational awareness to the CLF and staff. Afloat LF C2 considerations include the following:

(1) By retaining C2 afloat, the CLF can take advantage of the support capabilities inherent in Navy platforms while greatly reducing the requirement for C2 nodes and associated force protection requirements ashore and enhanced movement and maneuver.

(2) If air control does not transition ashore, the Marine TACC may not be established, and the Navy TACC would, therefore, continue to provide air control and support for the LF ashore. In a similar manner, if fire support does not transition ashore, the FFCC and the FSCC may not be established, and the SACC would continue to provide fire support coordination, planning, and control.

(3) When conducting amphibious operations, the CLF and the commanders of the GCE, ACE, and LCE may conduct C2 from aboard ship. The CE may remain embarked, moving ashore as the LF mission or operational situation allows. Although the GCE commander may establish an airborne or forward CE ashore, the GCE main command

post may remain afloat, at least initially. Likewise, the C2 structure of both the ACE and the LCE may remain afloat.

b. **Transition from Afloat to Ashore.** For larger-scale amphibious operations, retaining control afloat may be more difficult, and the CLF should consider the shipboard limitations in communications systems and available spaces to conduct C2 to determine how much of the C2 can remain afloat and which elements of the C2 may need to transition ashore. All control functions may not need to move ashore. When C2 is phased ashore, the LF combat operations center assumes control from LFOC. The functions of the combat operations center ashore mirror those of the LFOC.

(1) The SACC may incrementally phase responsibility for fire support coordination to the FFCC and/or FSCC as control is shifted ashore.

(2) Supervision of the DASC transitions from the Navy TACC to the Marine TACC as air control is passed ashore.

(3) As sufficient air defense assets are established ashore, the CLF will coordinate with the CATF to assume SADC responsibility in the landward sector of the operational area.

c. **Ashore-Based C2.** When C2 has formally moved ashore, the combat operations center will normally be in control and the Marine TACC and FFCC are usually established. However, until the amphibious operation terminates, the CLF may continue to utilize the facilities and C2 on the ships for support. As the amphibious operation progresses, the CLF may transition some C2 elements back to the sea base to reduce the footprint ashore. In the transition of air control back to sea, the Marine TACC, for example, may become a Marine TADC under control of the Navy TACC. The decision on when, and how, to transition C2 from ashore back to the sea base is driven by the operational situation or changes to the mission.

CHAPTER IV
PLANNING PHASE

"Amphibious flexibility is the greatest strategic asset that a sea-based power possesses."

B.H. Liddell Hart, *Deterrence or Defense*, 1960

SECTION A. OVERVIEW

1. Introduction

a. The planning process links the employment of the AF to the achievement of operational and strategic objectives through the planning, organization, and integration of the amphibious operation within the overall joint operation or campaign. The nature of amphibious operations gives rise to planning procedures that are both intricate and unique. This intricacy stems from the complex detail required to fully coordinate the landing of troops, equipment, and supplies by air and surface means; maximize maneuver, speed, and available fire support; and minimize the vulnerability of the AF. The uniqueness of amphibious planning stems from the interrelationships between the components of the AF, between the AF and the joint force, and between the AF and supporting organizations and agencies.

b. This section discusses the operational planning for amphibious operations. Detailed planning considerations for supporting functions (e.g., fires, communications, logistics, health services, legal, and protection) are discussed in later chapters and Service TTP and should be considered by planning staffs when developing the overall plan.

2. Tenets of Amphibious Planning

a. Planning for an amphibious operation is continuous, from the receipt of the initiating directive through the termination of the operation. Amphibious planning requires concurrent, parallel, and detailed planning by all participating forces. The planning pattern is cyclical in nature, composed of a series of analyses and judgments of operational situations, each stemming from previous situations. The tenets of successful amphibious planning are commanders' involvement and guidance and unity of effort.

b. **Commanders' Involvement and Guidance.** The complexity of amphibious operations requires AF commanders to drive the planning process. Their guidance and intent are central to planning and must be translated into a design for action by subordinates. AF commanders' decisions (e.g., AF AO, AF objectives, AF CONOPS, commanders' critical information requirements, and promulgated essential elements of friendly information) are required before additional steps in the process can proceed.

c. **Unity of Effort.** AF commanders ensure unity of effort by focusing their forces on mission accomplishment. AF commanders should view their operational environment as an indivisible entity, as operations or events in one area may have profound and often

unintended effects on other areas and events. Likewise, the AOA should be viewed as an integrated portion of the larger operational environment.

d. **Integrated Planning.** There are two parts to integrated planning in amphibious operations. **The first is the assembly of the AF commanders and their staffs in the same locality.** When this is not practicable, the exchange of liaison officers (LNOs) to perform certain planning functions is necessary. During planning, and particularly in crisis situations, AF commanders conduct their planning efforts in parallel and concurrently with each other and those of their higher and supporting headquarters. The same degree of integration by AF commanders and their staffs should also be achieved with subordinate units facilitating a coordinated and thorough plan. **The second part of integrated planning occurs across functional areas.** Integrated planning is facilitated by using operational planning teams which are ad hoc organizations formed around planners from functional areas, appropriate staff representatives, subordinate and supporting command LNOs, and other subject matter experts. The use of joint functions (C2, intelligence, fires, movement and maneuver, protection, sustainment, and information) enables commanders to integrate the planning effort and supervise the plan. The use of functional areas facilitates the consideration of all relevant factors and minimizes omissions. The key to this part of integrated planning is the assignment of appropriate personnel to represent each functional area.

For more information on joint planning, see JP 5-0, Joint Planning, *and JP 3-33,* Joint Task Force Headquarters.

3. Planning Directive

Following receipt of the initiating directive, the AF commanders issue a coordinated planning directive to harmonize staff actions and complete required planning in the time allowed. The planning directive specifies the plan of action and milestones to complete each major step in the planning process and the timeline for the development of OPLANs, OPORDs, operation general matters (OPGENs), operation tasks (OPTASKs), and other products.

4. Planning Methods

a. Amphibious planning can be conducted using a variety of joint and Service planning processes, including the joint planning process using the Adaptive Planning and Execution enterprise to facilitate and integrate planning activities.

b. The rapid response planning process (R2P2) is often used by the CATF and CLF in amphibious operations involving forward-deployed ARGs and MEUs. R2P2 uses a compressed timeline—normally six hours—that provides commanders and staffs with an accelerated planning mechanism that facilitates mission execution within six hours of warning order or alert order receipt.

For more detailed information on planning, refer to Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3122, Joint Operation Planning and Execution System (JOPES) series; *CJCSM 3130,* Adaptive Planning and Execution (APEX) series; *and JP 5-0,* Joint

Planning. *See Marine Corps Warfighting Publication (MCWP) 5-10*, Marine Corps Planning Process, *for further information on R2P2. See NWP 5-01,* Navy Planning, *for details on the Navy planning process.*

SECTION B. AMPHIBIOUS FORCE DECISIONS

5. Primary Decisions

a. The JFC issues an order (initiating directive) that sets in motion the planning for the execution of an amphibious mission. This order will contain guidance for the development of the plan prepared by the AF commanders. This guidance may include the amphibious mission, the purpose of the mission, the general location, and typically a target date for execution. Based on the orders passed from the JFC through the chain of command to the AF, the AF commanders in turn make other primary decisions. The decisions and who makes them are described below and reflected in Figure IV-1. In some cases, these decisions may have been made by the establishing authority and promulgated in the initiating directive. In the case of mutual decisions, both the CATF and CLF must concur or the decision is referred to the common superior or establishing authority for resolution.

(1) **Determine AF Mission(s).** AF commanders may decide on a coordinated mission statement or develop separate but supporting mission statements. The determination of a coordinated AF mission statement is a mutual decision presented to the JFC (or designated subordinate) for approval. If separate but supporting mission statements are chosen, then each commander submits their respective mission statement.

(2) **Select AF Objective(s).** AF objectives are normally physical in nature such as objectives to seize terrain, infrastructure (e.g., ports or airfields), or forces that should be seized, secured, influenced, or destroyed to accomplish the mission. AF objectives are designated in alphabetic order (e.g., AF Objective A and AF Objective B). The selection of AF objectives is a mutual decision approved by the JFC (or designated subordinate).

b. **Develop COAs.** AF staffs further develop COAs based on the guidance from the AF commanders. Normally, the LF planners will provide an LF COA for the ATF planners to build a supporting COA. At a minimum, COAs include the general area for a landing (which may already be specified by higher headquarters), designation of the main effort, the scheme of maneuver, and the task organization. Selected COAs will be wargamed and compared based on criteria established by the commanders.

c. **COA analysis and wargaming** follows JP 5-0, *Joint Planning,* guidance.

d. No later than COA development, the following decisions should be made:

(1) **Select COA.** At this point, the JFC selects a COA and the CONOPS (including fire support planning guidance) is prepared. The CONOPS is usually a written and graphic representation, in broad outline, of the intent of both of the commanders with respect to their portion of the operation. It gives an overall picture of the operation, including the transit, formation for landing, and the scheme of maneuver for accomplishing

the AF objectives. Both commanders prepare mutually supporting CONOPS. For example, the LF movement ashore may be accomplished using a ship-to-objective maneuver CONOPS or, if necessary or practical, one in which a beachhead will be established.

Decisions Responsibilities Matrix

Primary Decision	May Be Contained In the Initiating Directive	Decision
Determine amphibious force mission(s)	X	JFC*
Select amphibious force objective(s)	X	JFC*
Select course of action		JFC*
Select date and hour of landing	X	JFC*
Supporting Decisions		
Select method of entry		CATF/CLF
Select landing areas		CATF/CLF
Select landing beaches		CATF/CLF
Determine sea areas and echelon plan		CATF
Select landing force objectives		CLF
Select landing zones and drop zones		CATF/CLF
Other Decisions and Actions		
Select forward arming and refueling points		CLF
Determine go/no-go and abort criteria		CATF/CLF
Orders and OPGEN development		CATF/CLF
OPTASK Amphibious message		CATF/CLF

*CATF/CLF mutually agreed upon recommendations to JFC for final concurrence, who may delegate these responsibilities to subordinate commander.

Legend

CATF	commander, amphibious task force	OPGEN	operation general (message)
CLF	commander, landing force	OPTASK	operations tasking (message)
JFC	joint force commander		

Figure IV-1. Decisions Responsibilities Matrix

(2) **Select Date and Hour of Landing.** The date and hour of the landing is selected by the JFC or establishing authority and may be specified in the initiating directive. **D-day** is the unnamed day on which a particular operation commences or is to commence. **H-hour,** in amphibious operations, is the time the first landing craft or amphibious vehicle of the waterborne wave lands or is scheduled to land on the beach. **L-hour,** in amphibious operations, is the time at which the first helicopter or tiltrotor aircraft of the airborne ship-to-shore movement wave touches down or is scheduled to touch down in the LZ. Since most amphibious operations are complex and involve both surface and air ship-to-shore movement, L-hour may also be expressed in terms of a time differential from H-hour (e.g., H-12 or H+30 minutes), to assist in coordinating and synchronizing the operation across a common continuum. If L-hour and H-hour coincide, utilize H-hour. During planning, H-hour and L-hour are the scheduled or planned times for landing, but during execution, the JFC or establishing authority (with recommendation from the CATF/CLF) can make the decision to alter H-hour to the actual time of landing. For example, during planning, H-hour may be scheduled for 0800; however, for various reasons on D-day, it is determined that H-hour does not actually occur until 0900; accordingly, all events will now be based on the 0900 H-hour. If the CATF delays H-hour, the CATF will then promulgate a new H-hour. Supporting actions, such as NSFS or airborne assaults, are scheduled and conducted in relation to H-hour. In the case where the landing will be delayed from the planned H-hour, some events scheduled in planning for the period just prior to H-hour may be repeated until the new H-hour; others will be delayed and others will have to be cancelled. H-hour and L-hour are confirmed prior to commencement of the landing based on the weather, enemy situation, and other pertinent factors. Landing timing considerations are shown in Figure IV-2.

6. Supporting Decisions

Supporting decisions are those used by the CATF/CLF to refine the plan.

a. Methods of Entry

(1) The decision to establish beachheads or to conduct ship-to-objective maneuver is a CLF decision with input and concurrence from the CATF. Principal factors in determining whether to establish a beachhead or conduct ship-to-objective maneuver include the following:

(a) For large-scale amphibious assaults involving joint forcible entry operations, a beachhead is normally used. For an amphibious raid, the AF may be able to conduct ship- to-objective maneuver, effectively removing a beachhead as a consideration.

(b) A contested environment may severely limit ship-to-objective maneuver. A hostile or potentially hostile environment may dictate the need to have a beachhead. However, a beachhead may also present a target set that can easily be prosecuted by the enemy.

(c) The AF ability to adequately C2 forces from afloat platforms, phasing ashore only those portions of C2 when needed. If unable to provide the necessary C2, a beachhead may be required.

(d) For ship-to-objective maneuver, the AF should be able to sustain the LF from the sea base; otherwise, a beachhead or lodgment will be necessary.

Landing Timing Considerations

Date for Landing

- Availability of forces.
- Readiness of forces.
- Present and projected enemy situation.
- Seasonal conditions in the area under consideration.
- Local weather conditions, including: forecast sea state, currents, tides, surf, and solar/lunar conditions.
- Designation of limiting dates by a higher authority.
- Coordination with preliminary operations.
- Advantageous use of religious or cultural events in the area under consideration.

Hour for Landing

- Known enemy routine.
- Duration of daylight.
- Need for tactical surprise.
- Concept of operations ashore of the landing force.
- Favorable weather forecast conditions of wind, visibility, tide, current, sea state, surf, and solar/lunar conditions.
- Requirements for conducting certain operations during hours of darkness.
- Most effective employment of supporting arms.
- Immediately after certain countermine or assault breaching operations.
- Need for simultaneous landing of surface and helicopter borne forces.

Figure IV-2. Landing Timing Considerations

(2) **Beachhead.** As a type of lodgment, a beachhead is a designated area on a hostile or potentially hostile shore which, when seized and held, facilitates the continuous landing of troops and materiel and provides maneuver space for subsequent projected operations ashore. The CLF determines possible beachheads for each landing site and notifies the CATF of the selections so they may be considered for incorporation into the landing area plan. By using littoral maneuver, the AF may be able to maneuver around enemy defenses, enabling the LF to attack and secure the beachhead from positions of advantage. The CATF and CLF consider the following in delineating the beachhead area:

(a) Suitability of landing sites, including favorable configuration of the coastline from the LF perspective. Shorelines have three primary forms: convex, concave, and straight. The convex shoreline in the form of large promontories or deltas is normally the most favorable, despite its generally inferior hydrographic characteristics. It causes a dispersion of defensive forces and prevents enfilade fire on the landing beaches. The concave shoreline, particularly in the form of a bay or reentrant, is unfavorable since it provides opportunity for convergent massing of enemy fires at any point in the area and permits establishment of an organized system of interlocking sectors of fire, which are extremely disadvantageous to the AF. However, conditions such as the existence of sheltered water and favorable beach characteristics may dictate the selection of a concave shoreline despite its otherwise unfavorable characteristics. In such case, particular consideration is given to the promontories, which form the shoulders on either flank of the landing beach and provide naturally advantageous positions for defensive weapons. The straight shoreline has no prominent indentations or promontories and is relatively less

favorable since it lends itself to enemy enfilade fire. It does, however, represent a compromise between the advantages of a convex shoreline and the disadvantages of the concave shoreline.

(b) The vulnerability of the seaward areas of the beach and beach approaches to enemy mining require direct input from the CATF and MIWC. The most suitable landing sites are typically the most likely to be mined and may be the least favorable when MCM considerations are taken into account. Integration of the CATF's supporting MIWC in the amphibious planning process is critical to the effectiveness of MCM support for the amphibious operation.

(c) Terrain inland from the beaches and routes of egress.

(d) Suitability for the landing of landing craft, assault vehicles, and aircraft and as a DZ for the LF.

(e) Adequacy of maneuver space.

(f) Requirements for CSS.

(3) **Ship-to-Objective Maneuver.** As a tactical application of the concept of operational maneuver from the sea, ship-to-objective maneuver provides the AF a methodology to project forces through entry point(s) to maneuver toward or on the objective without the need to secure a beachhead to build combat power ashore. This option, which may be executed in a more distributed manner, may place a higher demand for landing beaches or sites and LZs. Ship-to-objective maneuver may result in a need for

TASK FORCE 58–OPERATION ENDURING FREEDOM

Initially established for the purpose of conducting amphibious raids in southern Afghanistan in 2001, Task Force 58 (TF-58) ultimately conducted an amphibious assault 350 miles inland to seize a desert airstrip south of Kandahar. Renamed Forward Operating Base (FOB) Rhino, this lodgment facilitated the introduction of additional joint forces, eventually leading to the isolation and seizure of the city. TF-58 was formed by aggregating two forward-deployed amphibious forces, the USS [United States Ship] Peleliu ARG [Amphibious Ready Group]/15th MEU [Marine Expeditionary Unit] and the USS Bataan ARG/26th MEU and a small fly-in headquarters staff of approximately 32 personnel. Brigadier General James Mattis, USMC [United States Marine Corps], TF-58's commander, chose to employ the two MEUs separately rather than attempt a complex reorganization into a single Marine air-ground task force. The timing of the operation was coordinated with a lull in special operations elsewhere, thereby leveraging a Navy SEAL [Sea, Air, and Land] detachment for the special reconnaissance of Rhino and beach hydrographic observations to support surface landings in Pakistan while at the same time conserving TF-58 assets for the actual assault.

Employing ship-to-objective maneuver and in-flight refueling, an assault force in CH-53 helicopters from USS Peleliu seized the airfield that became FOB Rhino. Additionally, the establishment of a craft landing zone and beach landing site, coupled with the granting of diplomatic access to a C-17-capable airfield and two intermediate staging bases in northern/eastern Pakistan, proved critical for the pre-staging, buildup, and sustainment of combat forces, and refueling for the AH/UH-1 helicopters escorting the CH-53s. Within 90 minutes of the initial assault, Marine KC-130 aircraft started landing at Rhino to begin building up combat power. Three days later, US Air Force C-17 aircraft began delivering Navy Seabees, their construction equipment, and the supplies needed to improve and maintain the runway. Throughout these actions, carrier and land-based aircraft provided fire support to the landing force (LF). Following the establishment of FOB Rhino, the LF transferred from the maritime component commander to the land component commander; however, a support relationship with the amphibious task force was maintained to provide sea-based logistical, administrative, medical, and other support to the LF.

Reference: *US Marines in Afghanistan, 2001-2002: From the Sea,* History Division, United States Marine Corps, Washington, DC, 2011

additional forces (such as more MIW assets, SUW assets to counter small boats, and other threats) time to set the conditions necessary to conduct the operation or time to clear additional sea approaches. Seabasing more of the C2, logistics, sustainment, medical support, and other capabilities enables forces using ship-to-objective maneuver to maintain momentum with a smaller footprint ashore.

For more information on seabasing, see paragraph 10, "Seabasing Considerations," and NWP 3-62M/MCWP 3-10, Seabasing.

(4) **Combined Methods of Entry.** Amphibious operations may utilize lodgments to support part of the amphibious operation, while conducting ship-to-objective maneuver for other parts. In other words, a combination of the two may be necessary and advantageous to successfully complete the mission. More mobile and lighter elements of the LF, for example, may proceed directly to the objective, such as those in helicopters, tiltrotor aircraft, and AAVs, while other elements (off-loading from landing craft and lighterage to include vehicles, heavy cargo, and additional troops) may need a secure lodgment. Although not required to initiate an amphibious operation, a lodgment may be needed later for sustainment or to conduct reception, staging, integration, and onward movement for follow-on forces.

b. **Select Landing Areas.** The landing area includes the beach, the approaches to the beach, the transport areas, the fire support areas (FSAs), the airspace above it, and the land included inland to accomplish the initial objectives. The selection of the landing area is a mutual decision (see Figure IV-3).

c. **Select Landing Beaches.** For amphibious operations, a landing beach is the portion of a shoreline required for the landing of an LF. Landing beaches are selected from

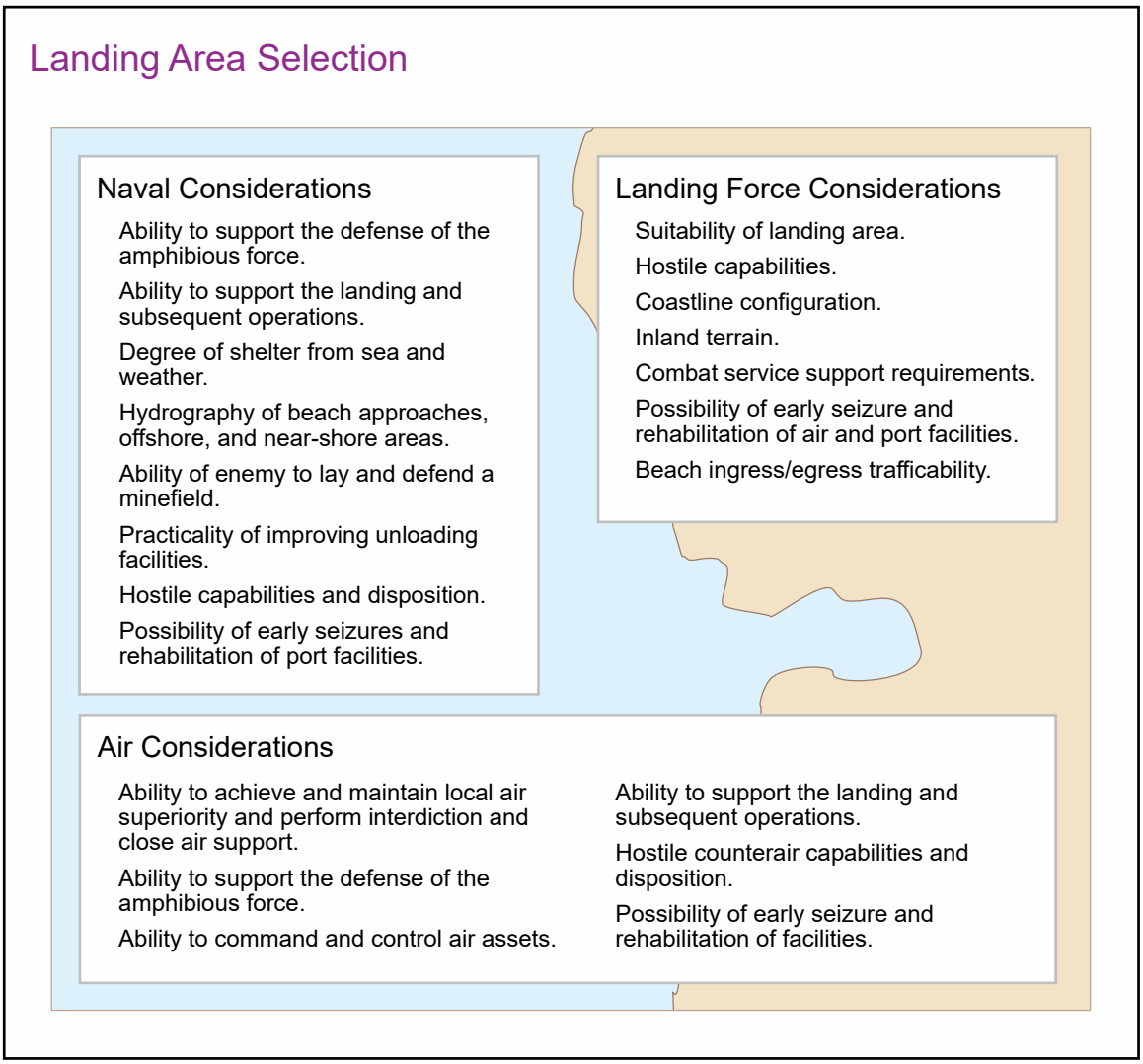


Figure IV-3. Landing Area Selection

within the selected landing areas. Multiple landing beaches enables the LF to achieve a position of advantage over the enemy by distributing firepower within enemy gaps that can concentrate and maneuver toward the main objective. Landing beaches that cannot be approached from several different directions should be avoided. Principal factors in the selection of landing beaches (in addition to those previously described for selection of landing areas) include:

(1) Suitability for landing craft (e.g., landing craft, utility [LCU]; landing craft, air cushion [LCAC]; and AAVs).

(2) Offshore approaches and tidal conditions.

(3) The suitability, location, and number of beach support areas (BSAs), beach exits, and nearby infrastructure. The BSA is to the rear of an LF or elements thereof, established and operated by shore party units. It contains the facilities for the unloading of troops and materiel and the support of the forces ashore; it includes facilities for the

evacuation of wounded, enemy prisoners of war (EPWs), and captured materiel. Landing beaches are designated by color (blue, red, green, yellow, orange, white, and purple). Subdivisions are further designated with the addition of a number (e.g., Green Beach 1, Red Beach 1, and Red Beach 2). The highest numbered beach is 3.

(4) The opportunity for surprise is especially important in amphibious assaults and raids, which involves a compromise between a beach which permits easy landing—with some risk of detection—and one which provides maximum security at the risk of a difficult or hazardous landing. Calm conditions are desirable, although movement through these waters may increase the difficulty of effecting surprise. Sheltered waters are usually enclosed in a bay or in the lee of islands, which can increase the risk of detection and interception.

(5) Determine requirement and feasibility of OTH operations. Consider threat, environmental conditions, likelihood of achieving surprise, and friendly force capabilities (e.g., power projection and sustainment). For additional information, see paragraph 10, "Over the Horizon Considerations."

(6) The landing beach may also be that portion of a shoreline constituting a tactical locality (e.g., the shore of a bay) over which a force may be landed.

(7) The selection of landing beaches is a mutual decision.

d. **Determine Sea Areas and Echelon Plan.** A sea area is recommended by the CATF and designated by the establishing authority to minimize the possibility of interference between various elements of the AF and supporting forces. The CATF designs all sea areas to support the amphibious operation. Included in the sea areas are the boat lanes, the LCAC lanes, the inner and outer transport areas, the FSAs or fire support stations, the approach routes for the ships to launch the AAVs, etc. The CATF determines the sea echelon plan, which provides for the dispersion of amphibious warfare ships in either an on-call or unscheduled status, to minimize losses due to enemy attacks and to reduce the area that must be cleared for mines. For more information on sea areas, see paragraph 14, "Sea Areas."

e. **Select LF Objectives.** LF objectives facilitate the achievement of AF objectives or uninterrupted landing of forces and materiel. LF objectives are selected by the CLF.

f. **Select LZs and DZs.** An LZ is a specified zone used for the landing of all aircraft. LZs may contain more than one landing site. A DZ is designated as a specific area on which airborne troops, equipment, or supplies are air-dropped. The CLF, in coordination with the CATF, selects LZs and DZs. Airspace control, defense, and communication support for the selected LZs and DZs may need to be provided by the CATF.

7. Other Decisions and Actions

a. **Select Forward Arming and Refueling Points (FARPs).** Amphibious operations will often require FARPs between the ATF and the objective to minimize the sortie generation time required to support operations. These can be established within a

lodgment or at intermediate LZs or DZs. FARP sites will be selected by the CLF based on ease of use, ease of sustainment, and survivability.

b. **Determine go/no-go and abort criteria** for the execution or delay of the amphibious operation. These criteria are a set of standards or conditions in the operational environment that the commanders use to decide to proceed or not during the action phase of the amphibious operation. The CATF and CLF should mutually agree on go/no-go/abort criteria during planning. The commanders should consider that the amphibious operation may be a part of a larger joint forcible entry operation that may require approval from the JFC to abort an amphibious operation. Go/no-go/abort criteria will vary depending on the type of amphibious operation and the specific mission. Examples of go/no-go/abort criteria may include:

(1) Maritime superiority not yet achieved.

(2) Air superiority not yet achieved.

(3) Increased enemy strength near beaches, LZs, or objectives.

(4) Weather hindering surface operations.

(5) Weather hindering air operations.

(6) Reduced number of amphibious warfare ships (e.g., delayed in arrival, material casualties [stern gate not working, ballast system inoperative]).

(7) Unfavorable sea state and surf conditions.

(8) Reduced landing craft availability.

(9) Reduced aircraft (e.g., transport, escort, fixed-wing) availability.

(10) Mines in the sea areas.

(11) Clearance of boat/approach lanes, CLZs, and LZs not achieved.

(12) Assault breaching mission incomplete.

(13) Lack of diplomatic clearance.

(14) Inability to mass friendly forces.

c. **Develop Orders, OPGENs and OPTASKs.** Commanders of naval forces use OPGENs and OPTASK messages to transmit orders, fragmentary orders, and tactical and operational tasks to elements of the ATF. Orders and OPGENs/OPTASKs serve as the principal means by which the commanders express their decisions, intents, and guidance.

(1) **Order and OPGEN/OPTASK Crosstalk.** After step four of the planning process and primary decisions have been completed, the AF commanders develop their

OPLANs, OPORDs, OPGENs, or OPTASKs. The staffs should maintain communication to ensure continued harmonization of their concurrent planning efforts. Depending on time available, once final drafts of the OPORD and OPGEN/OPTASK have been completed, a crosstalk and confirmation brief should be conducted between the commanders and staffs. This crosstalk compares these documents with higher and adjacent orders to facilitate unity of effort and to identify any discrepancies or gaps. Following the staff's correction of any discrepancies identified during the crosstalk, the OPORD and OPGEN will be submitted for approval and a confirmation brief is scheduled. Subordinate commanders provide confirmation briefings to the establishing authority once planning is complete. The participants brief their scheme of maneuver and fire support plan and the relationship between their unit's mission and the other units in the operation. The confirmation brief enables the higher commander to identify discrepancies between his or her order and the subordinates' plan(s) and enables corrective actions, if required, prior to execution.

(2) **Operational Tasking Amphibious Message (OPTASK AMPHIB).** The CATF, supported by the CLF, will develop the OPTASK AMPHIB. This overarching OPTASK specifies the ATF commander's intent, duties, and responsibilities; the operational area (e.g., AOA or AO/HIDACZ); all geographic areas (e.g., surface: inner transport areas, outer transport areas, beaches, CLZs, boat lanes; air: ingress, egress routes; fires: FSAs and fire support stations, no fire areas, targets), timelines for the assault, medical regulating instructions, and force protection instructions. The initial OPTASK AMPHIB should be promulgated no later than 72 hours prior to the assault to allow sufficient time for the subordinate units to plan. Updates can then be promulgated as more information becomes available. During R2P2, OPTASK AMPHIB will be planned, drafted, and released as soon as possible, with at least enough time for each control ship to properly review for safety/accuracy. An OPTASK AMPHIB may be released that covers the basics of amphibious operations (e.g., duties and responsibilities, beaches, sea areas, LZs communications). When a mission is assigned, an update would be sent with the additional information for that specific operation.

For more information on OPGENs and the OPTASK AMPHIB, see Allied Procedural Publication-11, NATO Message Catalogue*, and NTTP 3-02.1M/MCTP 13-10E,* Ship-to-Shore Movement.

d. **Conduct Transition.** Transition is an orderly handover of an OPLAN, OPORD, OPGEN, or OPTASK as it is passed to those tasked with execution of the operation. It provides those who will execute the plan or order with the situational awareness and rationale for key decisions necessary to enable a coherent shift from planning to execution.

8. Operation Assessment

a. Assessment is a process that measures progress of the AF toward mission accomplishment and occurs at all levels. The assessment process begins during mission analysis when the commander and staff consider what to measure and how to measure it to determine progress toward accomplishing a task, creating an effect, or achieving an objective. Assessment actions and measures, such as measures of effectiveness and measures of performance, help commanders adjust operations and resources as required,

determine when to execute branches and sequels, and make other critical decisions to ensure current and future operations remain aligned with the mission and end state.

b. The starting point for operation assessment activities coincides with the initiation of planning. Integrating assessments into the planning cycle helps the commander ensure the operational approach remains feasible and acceptable in the context of higher policy, guidance, and orders. This integrated approach optimizes the feedback senior leadership needs to appropriately refine, adapt, or terminate planning and execution to be effective in the operational environment.

c. Throughout planning and execution, the AF commanders and staff continuously observe the operational environment and assess the effectiveness of the amphibious operation. Assessment informs key decision points and identifies risk to upcoming operations. Because amphibious operations are conducted in a complex and dynamic environment, AF commanders must be able to detect, analyze, and adapt to changes in the operational environment during execution. Planners review the guidance, their understanding of the operational environment, the objectives, and the decisions that underpinned the original operational approach to refine or adapt the plan, the approach, or the guidance to make operations more effective and to inform the CATF/CLF and JFC.

d. The analyses of the operational environment might provide insight into basic questions such as:

(1) Are the objectives achievable given changes in the operational environment?

(2) Is the current plan still suitable to achieve the objectives?

(3) Do changes in the operational environment impose additional risks or provide additional opportunities to the AF?

(4) To what degree are the resources employed making a difference in the operational environment?

e. The CATF's and CLF's requirements for decision making should focus the assessment plan and activity. Assessment is a key component of the commander's decision-making cycle, helping to determine the results of operations in the context of the overall mission objectives, and providing recommendations for the refinement of plans and orders. Assessment also provides information the CATF and CLF use to inform adjacent and higher headquarters for their decision-making processes. If assessment products and analyses do not provide the commanders with answers to specific questions pertaining to recommended actions to improve operational progress, acting on opportunities, or mitigating risks, they do not provide value.

f. The six-step operation assessment detailed in JP 5-0, *Joint Planning,* are:

(1) Develop assessment approach

(2) Develop assessment plan

(3) Collect information and intelligence

(4) Analyze information and intelligence

(5) Communicate feedback and recommendations

(6) Adapt plan or operations

g. The true value of assessment reports lies in assessment analysis (vice the collected raw data). Therefore, planners take great care in determining the appropriate assessment analysis subject matter experts, collaboration venues, C2, and vetting processes. Planners also choose the best format for the assessment report products. The particular use of assessment products should drive the format and data analysis. Once assessment reporting formats have been agreed upon, assessment personnel determine the reporting battle rhythm—including any formal quality control or review process. Once the reporting cycle begins, assessment personnel prepare to overcome obstacles and orient assessment for emerging collection opportunities. Rarely will the required assessment analysis expertise reside solely in one command. Therefore, planners identify the most qualified subject matter experts throughout the AF to conduct the analysis.

h. The first step in planning the appropriate format for products is to determine the assessment report audience's current assessment format in place at the command. By closely mirroring the assessment format used by the CATF/CLF or JFC, planners can both save some time and also ensure the assessment data is presented in a manner that is familiar to the decision maker. No single format is correct. Formats may range from narrative, text-heavy reports to more simple Microsoft®PowerPoint stoplight charts, or even a web-hosted format with hyperlinks and drill-downs.

i. Assessment reports are created at different levels. Each of these reports will have different purposes and may require different periodicity and battle rhythm requirements. Assessment reporting of events may occur on an as-conducted basis (directly after feedback is received and analyzed) or they may be folded into periodic reporting (daily, weekly, or monthly reports). Planners must strategize and determine how each assessment report will feed and nest into the next echelon's report. Each product should go through some form of review or quality control check before it is distributed. This may be as simple as a single review authority, or it may be more rigorous with a multistep review.

For more information on operations assessment, see JP 5-0, Joint Planning, *and Army Techniques Publication (ATP) 5-0.3/MCRP 5-10.1/NTTP 5-01.3/Air Force Tactics, Techniques, and Procedures (AFTTP) 3-2.87,* Multi-Service Tactics, Techniques, and Procedures for Operation Assessment.

9. Operational Environment

a. Amphibious operations will likely be planned and executed based on one of three operational environments: permissive, uncertain, or hostile.

(1) **Permissive Environment.** In a permissive environment, host-country military and law enforcement agencies have the control, intent, and capability to assist operations that a unit intends to conduct. Forward-postured naval forces routinely conduct a variety of amphibious operations in permissive environments such as sea-based theater security cooperation and FHA. When conducting operations in a permissive environment, personnel and equipment going ashore are still considered an LF but are not normally referred to as such due to the cooperative nature of their missions. They are likely to organize by function or location of employment.

(2) **Uncertain Environment.** In an uncertain environment, host-country forces, whether opposed to or receptive to operations that a unit intends to conduct, do not have totally effective control of the territory and population in the intended operational area. Forward-deployed AFs are frequently called on to conduct crisis response operations, such as NEO or embassy reinforcement, in an uncertain environment.

(3) **Hostile Environment.** In a hostile environment, hostile forces have control, intent, and capability to effectively oppose or react to the amphibious operation. Large-scale amphibious assault provides the nation with the capability of forcible entry from the sea; it includes actions to seize key terrain and build and sustain a beachhead or military lodgment in the face of armed opposition.

b. Regardless of the size or nature of the mission, the organization, capabilities, and techniques required to conduct large-scale amphibious assaults in a hostile environment provide the basis for adaptation to conduct the other types of amphibious operations. Once an LF has executed its initial mission ashore, it may remain ashore to support ongoing operations or re-embark to be available for a new mission.

10. Over the Horizon Considerations

a. An OTH operation is initiated from beyond visual and radar range of the enemy shore. The objective of OTH operations, especially during ship-to-objective maneuver, may be to achieve operational surprise through creation of multiple threats and ultimately to shatter an enemy's cohesion through a series of rapid, violent, and unexpected actions that create a turbulent and rapidly deteriorating situation with which an enemy cannot cope. It is also a tactical option to hide intentions and capabilities and to exploit the element of tactical surprise to achieve AF objectives.

b. The decision to conduct OTH operations may be a force protection decision to mitigate threats to amphibious warfare ships from antiship cruise missiles or shallow water mines. This is especially true in contested environments. OTH operations provide greater protection to the AF from near-shore threats and provides escort ships a greater opportunity to detect, classify, track, and engage incoming hostile aircraft and coastal defense missiles while expanding the shoreline the enemy must be prepared to defend. Conversely, the expanded OTH operational environment impacts the buildup of combat power due to extended ship-to-shore transit time and distance, complicates C2, and strains logistic sustainment. As the situation ashore develops, the CATF and CLF adjust the ship-to-shore maneuver to reinforce successes and may change LZs and CLZs to keep enemy forces off

balance. To increase combat power, ease the logistic strain for forces ashore, and support follow-on forces, the designated commander may shift all or part of the AF to near-shore operations. This decision is based on the threat to forces afloat, CLF requirements, and the situation ashore. See Figure IV-4 for advantages and disadvantages inherent to an OTH operation.

c. **Planning Considerations.** While OTH techniques are applicable to any type of amphibious operation, special considerations are required. Operational requirements for planning an OTH amphibious operation should:

(1) Develop and maintain an accurate and timely tactical picture of the operational area. The need for timely intelligence data is increased for OTH operations because the number of possible landing sites is increased. The afloat tactical picture, as it pertains to the presence or absence of enemy naval forces between the ATF and shore, plays a significant role in the selection of possible landing sites and, therefore, affects the scheme of maneuver. Using OTH tactics requires consolidation of the tactical picture of land and water to provide the CATF and CLF with a consolidated base from which to plan and make tactical decisions. Interoperable C2 systems for maintaining situational awareness and a common tactical picture for the CATF and CLF are essential in OTH operations.

(2) Conduct surveillance and reconnaissance of the operational area with emphasis on possible landing sites. Positioning the AF OTH allows the landing site location to remain flexible. Landing sites may be chosen just before launching the first wave.

Over-the-Horizon Operations

Advantages

- Reduced risk to amphibious task force ships.
- Simplified air defense.
- Reduced mine threat to amphibious task force ships.
- Enhanced operational or tactical surprise.
- Increased flexibility.
- Reduced visible presence for certain peacekeeping operations.

Disadvantages

- Extended vulnerability of landing craft.
- Expanded operational environment requiring more self-defense assets.
- Increased cycle time for landing craft and aircraft (reduced throughput).
- Lost or reduced availability of naval surface fire support.
- Inability of amphibious assault vehicles to swim ashore.
- Decreased communications system connectivity.
- Greater susceptibility to sea state.

Figure IV-4. Over-the-Horizon Operations

(3) Reliable communications and accurate navigation. OTH operations planning is more complex than traditional amphibious planning due to the increased distances between launch platforms, landing beaches, supporting fires, and control platforms. This, in turn, requires greater coordination and communications capability. Flexibility must be maintained throughout the operation since LZs and CLZs may be widely separated. The vertical assault may land forces inland where they will be able to threaten key enemy positions, facilities, and lines of communications (LOCs).

(4) NSFS may be a requirement for successful prosecution of an amphibious assault. However, since one underlying reason for an OTH assault is the strength of coastal defenses, the primary mission of NSFS may shift from destroying enemy forces at a defended landing beach to isolating the landing area(s). Prelanding fire support in the vicinity of landing sites may also be restricted, especially prior to D-day and H-hour, to preserve tactical surprise. NSFS ships may initially be OTH with the ATF, closing the beach with the initial waves of landing craft. Although these ships can use land attack missiles for OTH fire support, their quantities are limited.

(5) OTH distances may be so great that the LCUs may not be able to be used except for the scheduled waves. For example, if the ATF is 30-50 nautical miles off the coast, the transit time could be four to six hours one way for the LCU. This means the LCUs will be able to make only one landing per day. Further, the LCACs will be able to land generally only three to four times per day under optimal conditions.

(6) If the amphibious operation is planned to be OTH, then more landing craft should be embarked.

(7) If the amphibious operation is planned to be OTH, then the AAVs may not be able to swim to the shore and thus, the LF will not be initially mechanized.

d. An OTH operation requires that the landing plan be fluid, containing alternate beaches and LZs that may even be selected while landing craft are in transit. Last-minute shift to landing beaches and LZs may dramatically affect all previous planning, including:

(1) Causing a delay in the LF reaching the objective.

(2) Modifications to the LF scheme of maneuver.

(3) Additional intelligence requirements to support the assault on the new beach or LZ.

(4) On-going MCM operations.

(5) Modification to the assault breaching plan.

(6) Advance force operations.

(7) C2 requirements to shift support for NSFS and CAS forces to a new beach/LZ.

Landing craft, air cushion vehicles provide the over-the-horizon heavy lift capability for the landing force.

(8) Supporting SOF operations.

(9) Naval beach group operations, especially beachmasters.

11. Seabasing Considerations

a. Seabasing is the deployment, assembly, command, projection, reconstitution, sustainment, and re-employment of joint combat power from the sea without reliance on land bases within the JOA. Operations from a sea base enables rapid movement to the area of crisis and the buildup of combat power while in international waters without political restrictions. The decision to conduct seabasing operations depends on the tactical situation and the scope and intensity of the assigned mission. In the decision-making process, a JFC can select and task organize from a wide range of naval, joint, or multinational forces. In so doing, employing the seabasing construct provides a JFC with options to close, assemble, employ, sustain, and reconstitute forces for amphibious operations. Units that could constitute a sea base should possess a wide range of capabilities that complement each other.

b. **Planning Considerations.** Seabasing enables operational maneuver for ship-to-shore movement and improved operational access to the joint force during the action phase of amphibious operations while significantly reducing the footprint ashore and minimizing

the permissions and force protection support required from or levied on host nations. Seabasing is an enabler for ship-to-objective maneuver.

(1) The situation on the ground may require the CATF and CLF to minimize the forces ashore. Seabasing allows certain ATF and LF support functions to remain aboard ship.

(2) With a sustainable logistics tail at sea, a sea base leverages the ATF's ability to operate from international waters, while providing support for the LF ashore.

(3) Seabasing increases the maneuver options for LF ashore by reducing the need to protect elements such as C2 and logistic supplies.

(4) Continuous sustainment of the sea base and the supported forces ashore requires logistic operations and plans personnel to consider implications across the range of logistics. Limited logistic support will be available to support other forces ashore that arrived in the operational area via means other than the sea base.

For more information on seabasing, see NWP 3-62M/MCWP 13-10, Seabasing.

SECTION C. MOVEMENT AND AREAS

12. Movement Planning Responsibilities

a. **Movement Plan.** The CATF prepares the movement plan. In operations involving several attack groups, the CATF usually prepares a general movement plan, which includes coordination measures as necessary. Subordinate force and group commanders will prepare their own detailed movement plans. Because details of the movement depend on overall requirements of the operation, the movement plans are generally among the last to be completed. Each movement plan is normally included as an annex to the appropriate OPLAN or OPORD.

b. **Movement Coordination with Other Forces.** Coordination measures between forces supporting the amphibious operation and the AF will normally be provided in planning guidance issued by the JFC or designated commander.

c. **Postponement Plan.** Postponement may be necessary because of weather conditions, unexpected movement of major enemy forces, or failure to meet go/no-go criteria after the AF has started its movement from final staging areas toward the operational area. A postponement plan will be prepared by the CATF and is usually promulgated as part of the OPLAN. Usually, postponement is on a 24-hour basis, which involves backtracking or diversion of ships into a designated sea area. A longer postponement may involve redeployment of the force to a staging area. Execution of the postponement plan will normally be controlled by the JFC or designated commander, based on the recommendations of the CATF and CLF, or other JFC.

d. **Alternate Plans.** The alternate plan for an amphibious operation may differ from the preferred plan and will necessitate branch movement plans. Movement plans should,

therefore, be flexible enough for execution of alternate plans at any point between the final staging area and the operational area.

See Chapter V, "Embarkation, Rehearsal, and Movement," paragraph 8 "Echelons of the Landing Force," for details on integrating the AE, AFOE, and maritime pre-positioning ships (MPSs).

13. Sea Routes

a. **En Route to the Operational Area.** Sea routes and en route points to the operational area will normally be planned by the CATF. Routes selected should lead from all possible ports of departure to the operational area. Alternate routes should also be provided to avoid interference between forces and to permit execution of alternate plans should the threat of enemy attack or weather prevent use of primary routes. Routes and route points should be named to facilitate reference. Small-scale charts, which show sea routes and route points, are prepared and included in the OPLANs and OPORDs of appropriate ATF echelons. All sea routes should be wide enough for transport and movement group commanders to maneuver the group without interfering with the movement of other groups.

b. **Within the Operational Area.** CATF determines sea routes in the operational area. During planning, sea route selection should take into consideration the missions of various task forces, groups, units, and elements in the AF so they may proceed expeditiously to their assigned stations without interference. Sea routes to the operational area connect with sea routes within the operational area at designated points just outside the ocean operating area to minimize interference during the deployment and movement of

United States Ship San Antonio (LPD-17) transits the Suez Canal en route to the operational area.

forces from their cruising or approach formations to assigned stations or areas. Sea routes in the operational area should be selected that:

(1) Provide a minimum of interference among ships and formations.

(2) Provide areas clear of mines and navigational hazards to the maximum extent possible.

(3) Provide sufficient dispersion to prevent concentrations that would make the AF a desirable target for conventional or CBRN weapons attack.

14. Staging Areas

a. The CATF, in consultation with the CLF, may decide to use staging areas while en route to the operational area. The AF may stage at one or more intervening ports for refueling, logistic support, emergency repairs, or final rehearsals. Considerations include:

(1) Availability of repair facilities and service craft.

(2) The distance of the staging area from the landing site, which should minimize both risk of logistics delay and interdiction.

(3) Anchorages, which are assigned to facilitate entry and sortie of transport and movement groups staging through the area while avoiding vulnerable concentrations.

(4) Suitable areas that are available to conduct rehearsals.

(5) Provisions made for replacement or repair of critical supplies or equipment expended or damaged during rehearsal.

b. The CATF selects the staging area.

15. Sea Areas

a. To minimize the possibility of interference between various elements of the AF and other supporting forces, sea areas in the vicinity of the landing area will be selected by the CATF and approved by the JFC. The sea areas will be divided into a number of operating areas as depicted in Figure IV-5. These areas may be connected by lanes, areas, and channels cleared of mines and obstacles.

b. **Ocean Operating Areas.** Two kinds of ocean operating areas may be selected.

(1) **Distant Retirement Area.** A distant retirement area is located to seaward of the close support area and divided into a number of operating areas in which the AF may retire and operate in the event of postponement, prohibitive weather or sea state, or to prevent concentration of ships in the landing area.

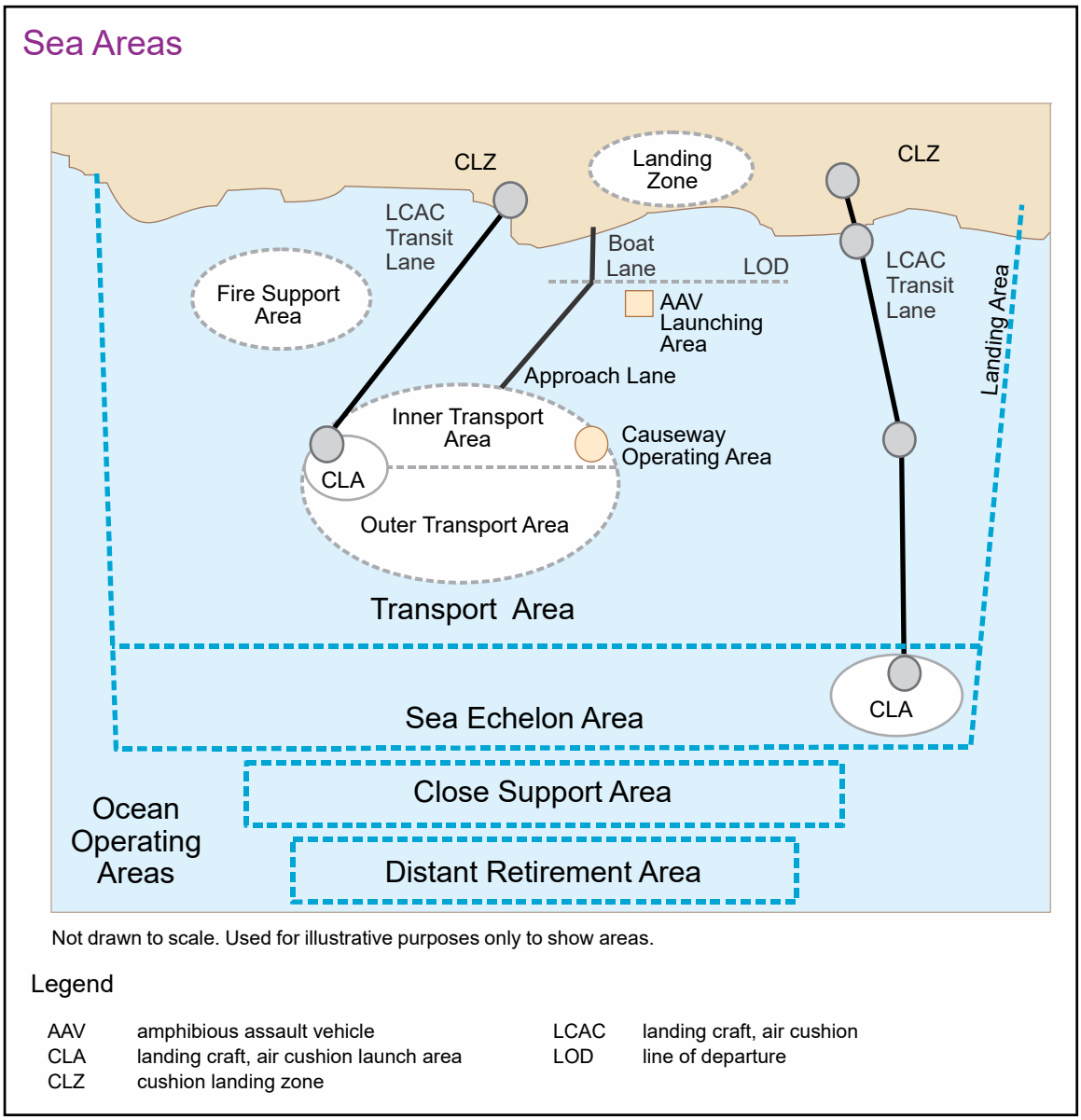


Figure IV-5. Sea Areas

(2) **Close Support Area.** A close support area is the portion(s) of the ocean operating area nearest to, but not necessarily in, the objective area. They are assigned to CSGs, surface action groups, surface action units, and certain logistic ships.

c. **Sea Areas Within the Landing Area.** Areas in the landing area extending outward to the inner limits of the close support areas include:

(1) **Sea Echelon Area.** The sea echelon area is the area to seaward of a transport area from which amphibious warfare ships and surface combatants are phased into the transport area and to which these ships withdraw from the transport area. The use of a sea echelon area enables dispersion of the force as a defense against attack, but its location is not so distant that ships cannot be readily available to enter the transport area as required.

(2) **Transport Area.** A transport area is assigned to a transport organization for the purpose of debarking troops and equipment. The maximum number of ships in the transport area is determined by force protection requirements, availability of forces for MCM operations, and local hydrography and topography. Transport areas include:

(a) **Outer Transport Area.** An area inside the screening area used by amphibious warfare ships, surface combatants, and transports after arrival in the objective area. It is located sufficiently seaward of landing beaches to provide for effective protection against shore batteries or antiship missiles. Ships involved in the operation remain underway in this area and may initiate OTH operations or be phased into the inner transport area for a near-shore assault.

(b) **Inner Transport Area.** An area located close to the landing beach which transports may utilize to expedite unloading by reducing the distance to the beach. Considerations are: depth of water, navigational hazards, boat traffic, and enemy action.

(3) **Landing Craft, Air Cushion Launch Area (CLA).** CLAs are usually located in the transport area; however, in an OTH operation, CLAs may be located anywhere in the landing area, to include the sea echelon area. The CLA (the sea component) and CLZ (the beach component) are connected by transit lanes.

(4) **AAV Launching Area.** Areas located near and to seaward of the line of departure (LOD) to which amphibious warfare ships proceed to launch AAVs.

(5) **Causeway Operation Area.** The causeway launching area is an area located in the inner transport area near the LOD clear of the approach lanes.

(6) **Boat and Approach Lanes.** A boat lane is a lane for displacement landing craft, which goes from a LOD to the landing beaches. The width of the boat lane is determined by the number of craft that need to safely transit the boat lane. The beach can be wider than the boat lane and several boat lanes can serve one beach. An approach lane connects the transport area to the boat lane. It indicates the exact route displacement landing craft use to approach the LOD from the transport area.

(7) **FSAs or Fire Support Station.** An appropriate maneuver area assigned to fire support ships by the naval force commander from which they can deliver gunfire support to an amphibious operation.

d. **Geographic Reference Points.** Planners should develop a complete system of geographic reference points for the operational area and surrounding ocean area to indicate routes (particularly where the direction of the routes changes), to depict the shape and location of the areas discussed above, and for certain locations not related to areas or routes. Reference points will be defined by exact latitude and longitude and will be tied to terrain or other identifiable feature when possible to enable rapid association location.

16. Coordination During Passage

a. Forces not a part of the AF that are supporting the AF must coordinate their movement within the AOA with the ATF.

b. All commanders should remain cognizant of the general scheme and operational areas of other forces and the need for maintaining the schedule and proceeding along prescribed routes. If deviation is required, the commander of the group will determine whether to break EMCON, if established, to advise other commanders of the situation.

c. The AF, or elements thereof, may receive significant intelligence while en route to the operational area when advance forces or forces external to the AF conduct pre-D-day operations in the operational area or where remote sensor data is provided. During the extended transit period, the LF CE requires access to intelligence, surveillance, and reconnaissance products to determine the up-to-date enemy and friendly situation. The AF's intelligence center is responsible for timely dissemination of pertinent intelligence to the CATF and CLF. ATF ships receiving intelligence share it with the embarked LFs.

17. Approach to the Operational Area

a. Approach to the operational area includes the arrival of various task groups in the vicinity of the operational area. These forces aggregate as necessary according to assigned tasks and proceed to designated positions in the operational area. During this critical period, additional protective measures may be necessary. These measures may include:

(1) Counterair measures, including air strikes against enemy airfields within range of the landing area.

(2) Location and neutralization of enemy submarines, surface craft, obstacles, minefields, and land-based threats that can interfere with the approach.

(3) Selection of approach routes that avoid lengthy exposure to fire from enemy land-based threats.

b. Approach of the main body is usually more complicated than that of the amphibious advance force due to the size of the force and its careful timing relative to H-hour. However, if an amphibious advance force has been employed, they may have implemented many of the necessary protective measures to protect the main body during its approach. In particular, mine clearing assets of the amphibious advance force will normally have cleared enough of the landing area to permit the main body to approach with less risk.

c. Coordination and timing is of utmost importance in the final stages of the approach of all elements of each movement group to prevent interference between elements and permit each to arrive at its assigned position at the proper time to commence its task. The presence of advance force elements already in the landing area may increase the complexity of the amphibious landing. The amphibious advance force commander is to keep elements of the amphibious advance force from interfering with the approach of the main body. When the AF is composed of two or more task groups, the CATF normally coordinates the

"A comparison of the several landings leads to the inescapable conclusion that landings should not be attempted in the face of organized resistance if, by any combination of march or maneuver, it is possible to land unopposed within striking distance of the objective."

Major General A.A. Vandegrift, US Marine Corps
Commanding General, 1st Marine Division, 1 July 1943

approach of the various task groups, but the task group commander is responsible for the movements of each individual task group.

18. Littoral Maneuver

a. Littoral maneuver provides ready-to-fight combat forces from the sea to the shore to achieve a position of advantage over the enemy. It relies on naval and other joint forces to conduct sea control operations to establish local or regional maritime superiority to provide maneuver space and enables the force to close within striking distance to remove landward threats. The ability to conduct littoral maneuver provides an advantage for the AF by imposing a continuous coastal threat on the enemy that may cause dispersal of enemy forces, potentially dissipating enemy defenses. The mobility provided by naval air and surface movement platforms is then employed to exploit those gaps. Littoral maneuver enables AFs to operate across a wider geographic area in a more decentralized manner. Informed by awareness of the enemy's capabilities, the ability to maneuver within the enemy's weapons employment zone and evade detection by enemy sensors and weapons is perhaps the critical consideration for littoral maneuver.

b. Littoral maneuver in amphibious operations is an integrated approach bridging the boundary between land and sea. Ship-to-shore movement control provides the framework to accommodate the necessary coordination, while the landing plan provides the detailed documentation for executing ship-to shore movement to support littoral maneuver. Seabasing increases littoral maneuver options and directly supports and enables the landward maneuver component as discussed in Chapter VI, "Action Phase," paragraph 10, "Landing Force Operations Ashore."

c. Littoral maneuver may be employed directly against an objective, including inland objectives, as the main effort; to seize infrastructure, beachheads, or lodgments that enable the arrival of follow-on forces; to conduct raids; or to pose a continuous coastal threat that causes an enemy to dissipate forces.

SECTION D. SHIP-TO-SHORE MOVEMENT

19. Responsibilities and Planning

a. The plan for ship-to-shore movement to land troops, equipment, and supplies at the prescribed times, places, and in the formation required to support the LF scheme of maneuver is developed by the CATF and CLF. Ship-to-shore movement is the portion of the amphibious operation that includes the deployment of the LF from amphibious warfare ships to designated landing areas and LZs and is perhaps the most critical part of the action

phase. However, it can also include the movement of forces, personnel, and equipment from shore back to ships at sea, such as in an amphibious withdrawal or retrograde from either a raid or for the conduct of follow-on LF operations. For AF support to crisis response and other operations, ship-to shore movement in NEOs and other crisis response operations may involve the movement of the LF ashore to support the evacuation and then the movement of evacuees back to the ships for further air or surface transport to a safe haven. During humanitarian assistance, it may involve the movement of supplies, personnel, and vehicles ashore to provide relief

b. **Ship-to-Shore Movement Responsibilities.** The responsibilities for the CATF, CLF, and commanders of other assigned forces to the AF during ship-to-shore movement are discussed below.

(1) The CATF, in close coordination with the CLF, is responsible for the preparation of the overall ship-to-shore movement and landing plan. During execution of the amphibious operation, the CATF has overall responsibility for ship-to-shore movement but will coordinate with the CLF to adjust for changing situations as revealed by intelligence sources or LFs ashore. The CATF is also responsible for debarkation until termination of the amphibious operation, at which time the responsibilities for off-load of the AFOE and follow-up shipping and LOTS operations may be passed to another organization designated by higher authority. In the case of an amphibious assault, the operation will normally be terminated only after the entire AFOE is ashore.

(2) The CLF presents LF ship-to-shore movement requirements to the CATF. The CLF provides information on the availability of organic assets (helicopters and amphibious vehicles) to the CATF and prepares the documents contained in the LF landing plan.

c. Based on a rough estimate of the size of the LF, the CLF begins planning the scheme of maneuver ashore. The scheme of maneuver influences the selection of beaches, designation of assault lanes, fire support planning, the number of landing craft required, and the load-out of the ships. Detailed planning for the ship-to-shore movement can begin only after the LF scheme of maneuver ashore is determined and the LF CONOPS is approved. The ship-to-shore movement planning sequence (see Figure IV-6) is a coordinated effort between the ATF and LF. The planning of the ship-to-shore movement is an iterative process. The LF scheme of maneuver and the threat affects the locations of the sea areas (e.g., inner transport areas, outer transport areas), the method of entry, the beaches and the LZ, and the number and type of landing craft and may affect the assignment to shipping. This iterative planning process between the CATF and CLF will ensure the best load out and the best ship-to-shore plan that considers the air and surface plan, the threat, the number of landing craft that need to be embarked, etc. Included in the planning is the selection of necessary approach and retirement lanes, checkpoints, rendezvous areas, and aids to navigation to facilitate movement of troops. In an amphibious operation, a rendezvous area is the area in which the landing craft and amphibious vehicles rendezvous to form waves after being loaded and prior to movement to the LOD.

d. The most difficult and complex ship-to-shore movement occurs during an amphibious assault. The AE is comprised of units and craft assigned to conduct the initial

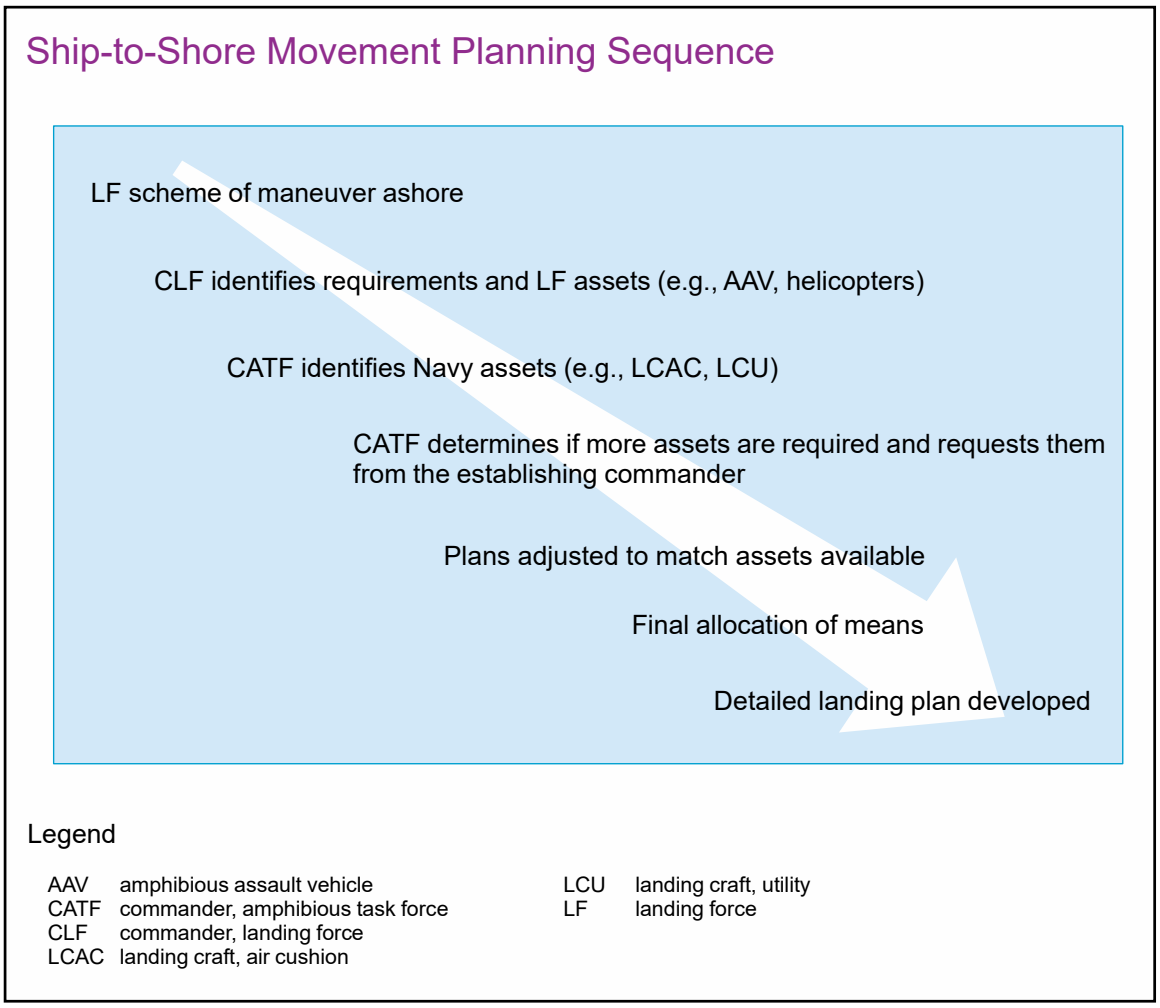


Figure IV-6. Ship-to-Shore Movement Planning Sequence

assault on the operational area. Assault troops, vehicles, aircraft, equipment, and supplies that are not needed to initiate the assault, but are required to support and sustain the assault, are known as the AFOE. The AFOE will usually come in after the AE has conducted the initial assault. During ship-to-shore movement, the LF, landing craft, aircraft, and amphibious warfare ships are most concentrated and vulnerable to enemy fire, not to mention the natural hazards of weather, sea state, and surf conditions. Movement control requirements are complex, and detailed coordination with supporting arms is essential.

e. Considerations for ship-to-shore movement planning include the following:

(1) Tactical integrity of the LF enables unity of command and execution of proven TTP during amphibious operations. The organization for landing should closely mirror the tactical formations of the LF and enable adequate C2 for the respective commanders. As feasible, the LF should embark on assigned amphibious warfare ships, landing craft, and helicopters along normal organizational lines. However, for the fastest off-load, consideration should be given to spreading the unit to more than one ship.

(2) Available amphibious warfare ships and landing craft. The type and quantity of amphibious warfare ships, landing craft, small boats, and amphibious vehicles used for the ship-to-shore movement will influence every aspect of the planning and execution of the operation. The inherent capabilities and characteristics of available ATF assets play a role in the development of the LF CONOPS.

(3) Ship and landing craft cycle time. The ship's flight deck and well deck are limited in the length of hours they can operate. Further, for large-scale operations, the ships may be cycled into the inner transport areas for the most expeditious off-loading. Generally, not all ships can be in the inner transport areas at the same time.

(4) Required degree of dispersion of ships, to include contemplated employment of a sea echelon plan.

(5) Protection of the AF is a matter of mutual concern to the JFC, CATF, and CLF. Coordination of the use of LF assets (e.g., aircraft, antiaircraft missiles, crew-served weapons, ground-based air defense assets) to support the defense of the ATF may be required. Protection comprising both active and passive measures should be provided during all phases of the amphibious operation but particularly during the vulnerable period of ship-to-shore movement. The increasing threat from precision-guided munitions should also be considered. Active protection includes defensive counterair operations, ASW and anti-small-boat screens, covering forces, electronic countermeasures, offensive counterfires, obscuration, defeat of WMD delivery systems, and NSFS. Passive protection places major emphasis on dispersion and mobility. The threat impacts the ATF's standoff from the beach and which beaches and LZs can be used. If, during the landing, an unforeseen threat appears, ship-to-shore movement operations may need to be curtailed to enable the ships to maneuver and/or reposition.

See Chapter VIII, "Protection," for more information.

(6) Flexibility. The ship-to-shore movement plan should have sufficient flexibility to exploit enemy vulnerabilities that may become apparent after the commencement of the landing.

(7) Load-out. Once the AF is organized/loaded aboard the ATF in the embarkation phase, it is very difficult to change landing serials while underway. Rearranging a vehicle for a different off-load serial can take hours or, if a major change in mission occurs, days for a complete load reconfiguration. In such cases, ATF units may have to divert to a sufficiently sized off-load site, pier, or ISB, which could impact the timing of the amphibious operation.

(8) Weather and Sea State. Planners must consider the weather and sea state forecast for the entire period. Rough seas or fog may impede, stop, or delay the ship-to-shore movement. Weather conditions may be favorable for D-day, but, for subsequent days, the forecast may be unsuitable for the ship-to-shore movement. Thus, while initial waves of the LF may arrive ashore, subsequent waves may be delayed until more favorable conditions allow the landing to continue. To accommodate emergent resupply, LF planners may designate specific aircraft to deliver critical supplies ashore.

"It was to be a brutal day. At first light on 15 June 1944, the Navy fire support ships of the task force lying off Saipan Island increased their previous days' preparatory fires involving all caliber of weapons. At 0542, Vice Admiral Richmond K. Turner ordered, 'Land the landing force.' Around 0700, the landing ships, tank (LSTs) moved to within approximately 1,250 yards behind the line of departure. Troops in the LSTs began debarking from them in landing vehicles, tracked (LVTs). Control vessels containing Navy and Marine personnel with their radio gear took their positions displaying flags indicating which beach approaches they controlled."

John C. Chapin, Breaching the Marianas: The Battle for Saipan, 1994

(9) Availability and planned utilization of supporting arms.

(10) Need for speed and positive centralized control.

(11) MCM and obstacle reduction requirements including assault breaching operations in the SZ and on the beach.

(12) Go/no-go criteria.

(13) Hydrographic conditions.

(14) Recovery and salvage of amphibious vehicles and landing craft.

f. **Relationship to Other Planning.** Fire support plans should be carefully integrated with the landing plan. The landing plan should support logistic requirements of all forces. Likewise, the completed landing plan will drive embarkation planning. Maximum attention should be given to preserving OPSEC during planning.

g. **Support Organizations and Agencies.** Organizations and agencies may be established to support the ship-to-shore movement plan. These organizations and agencies (i.e., terminal service battalion, amphibious construction battalion, or cargo handling and port group units) may be required to support the off-load of MPSs or merchant ships. As developed seaports and airports become available, they are used to supplement traditional beach operations.

See MCTP 13-10M, Amphibious Embarkation*, and NTTP 3-02.1M/MCTP 13-10*, Ship-to-Shore Movement*, for further detailed discussion on ship-to-shore movement considerations and planning.*

20. Surface Movement

a. Displacement and non-displacement landing craft are used to land troops, equipment, and supplies in amphibious operations by surface ship-to-shore movement. Depending on the mission, a majority of the AE and AFOE may have to be landed by surface means.

b. **Transporting Personnel, Vehicles, and Cargo Ashore.** The surface transportation modes used to move personnel, supplies, and equipment ashore include landing craft, amphibious vehicles, and causeway ferries.

(1) **Landing Craft.** A landing craft is designed for carrying troops and their equipment and for beaching, unloading, and retracting. They are also used for resupply operations. Vehicles and the majority of equipment and supplies from amphibious warfare ships are usually transported ashore by landing craft.

(a) The LCU-1600 is a displacement landing craft used to land heavy vehicles, equipment, personnel, and cargo in an amphibious operation and is normally carried in the well deck of an amphibious warfare ship. In addition, the LCU's crew habitability features enable independent transits and a persistence for a wide range of applications, such as SZ salvage, FHA, NEOs, and diving and surveillance, and as a platform for small-boat operations.

(b) The LCAC is a high-speed (35+ knots), nondisplacement landing craft capable of conducting OTH, ship-to-shore movement. Carried in the well deck of an amphibious warfare ship, the LCAC—with its speed and ability to carry troops, vehicles, and cargo over-the-beach—complements the LCU and provides the flexibility to enhance access for the AF in the critical surface ship-to-shore movement stage. Although LCACs are landing craft, their employment differs from displacement landing craft because their speed is greater and they can traverse over some obstacles. However, they are often maintenance-intensive and can easily be damaged by enemy fires.

(c) **Army LCU-2000.** These craft are not organic to an AF or MPF; however, the craft can be utilized in support of amphibious operations. The LCU-2000 is a self-deployable displacement craft used for the transport of combat vehicles and sustainment cargo. It provides intratheater movement of cargo and equipment. It is also ideally suited for the discharge or back load of sealift, including RO/RO vessels.

(d) **Army Logistics Support Vessel (LSV).** The LSV is self-deployable and self-sustainable for 45 days. The vessel is capable of intratheater line haul of cargo to support unit deployment/relocation, tactical and sustained resupply to remote, and undeveloped areas along coastlines and on inland waterways, as well as ship-to-shore movement and return of personnel, outsized/oversized cargo, and equipment. The LSV is equipped with both a bow and stern ramp.

(e) Landing craft, mechanized, and MPF utility boats are not organic to amphibious warfare ships and are used primarily for MPF support to amphibious operations.

(2) **Amphibious and amphibious assault vehicles** are wheeled or tracked vehicles capable of operating on both land and water. In addition to the capability to transport troops ashore and then proceed on to inland missions, they can also be used to move a limited amount of cargo ashore when transfer of cargo at the beach is not desired

or when surf conditions, reefs, or other hydrographic conditions prohibit beaching of landing craft.

(a) The AAV is a fully tracked, amphibious vehicle tasked to land the surface assault elements of the LF and their equipment from amphibious warfare ships to inland objectives. Once ashore, AAVs conduct mechanized operations and related combat support.

(b) The lighter, amphibious resupply cargo are capable of transporting a small amount of cargo in over-the-beach operations from ships to inland transfer points. However, they are mainly employed to provide SZ salvage support for LCUs.

For information on transporting troops and cargo on landing craft, see MCTP 13-10M, Amphibious Embarkation*. For additional information on employment considerations, see NTTP 3-02.1M/MCTP 13-10E,* Ship-to-Shore Movement*; NWP 3-02.12/MCTP 13-10A,* Employment of the Landing Craft, Air Cushion (LCAC)*; MCTP 3-10C,* Employment of Amphibious Assault Vehicles (AAVs)*; and NTTP 3-02.14,* Naval Beach Group Operations*.*

(3) **Modular Systems (INLS, Army-modular causeway system)** are powered and nonpowered causeway and ramp module sections locked together like building blocks to create a variety of floating structures and can be used to support LF off-loads, particularly AFOE, either as a causeway pier, RO/RO discharge facilities, or causeway ferries. INLS is normally used to support MPF in-stream on-load and off-loads and is transported as part of the MPF equipment set. The Army modular causeway systems are similar in function to the INLS. These unit sets are based for pre-positioned forward and also in the continental US. Causeway ferry operations may be augmented with the elevated causeway system to support the AFOE. The elevated causeway system is usually carried to the operational area aboard MSC-owned or -chartered vessels.

For additional information on modular systems, see JP 4-01.6, Joint Logistics Over-the-Shore, *and NTTP 3-02.3M/MCTP 13-10D,* Maritime Prepositioning Force Operations*.*

(4) **Small Boats and Riverine Craft.** If small boats and riverine craft are available, their organic fires, reduced signature, high speeds, and C2 capabilities provide a unique capability and capacity to help provide force protection and guide the LF ashore.

21. Air Movement

a. Aircraft employed in ship-to-shore movement are organic to the LF, and their employment is primarily determined by the CLF. They are used for personnel, supplies, and equipment transport; escort; and C2 during ship-to-shore movement. Vertical lift aircraft add significant flexibility to amphibious operations. Helicopters can operate from all amphibious warfare ships and land in almost any cleared site within the landing area.

b. **Helicopters and Tiltrotor Aircraft.** Helicopters and tiltrotor aircraft provide a range of options to enhance littoral maneuver. Long-range, vertical assault aircraft can project deep into the landward portions of the operational area, providing the direct

transport means to conduct ship-to-objective maneuver. When employed, these assets complement the landing craft in the off-load of high-priority and emergency resupply items and can do so at greater speeds and distances from the shore.

(1) Heavy-lift assault support helicopters are designed to transport personnel, supplies, and equipment for the AF.

(2) Tiltrotor aircraft are a medium lift assault support aircraft primarily used for the transport of personnel, supplies, and equipment. They are a multi-engine, self-deployable, tiltrotor aircraft designed for assault support across the range of military operations.

SECTION E. LANDING PLAN

22. Landing Plan Overview

a. Ship-to-shore movement planning for the AF is given final form and expression in the landing plan. The landing plan is designed to support the LF's CONOPS, keeping in mind the inherent capabilities and operational characteristics of available amphibious warfare ships and landing craft.

(1) The landing plan is prepared after the final allocation of means has been made. It represents the integrated sum of detailed plans for waterborne and airborne ship-to-shore movement prepared by corresponding ATF and LF commands at all levels. The plan should maximize range and speed capabilities of surface landing and amphibious assault craft and aircraft (helicopter and tiltrotor aircraft) that enables coordinated operations over a wide range. A flexible landing plan enables the AF to gain and retain tactical initiative, enhances operational flexibility, takes advantage of enemy force dispositions and weaknesses, and employs the element of surprise to the maximum extent.

(2) The landing plan is composed of certain specific documents that present, in detail, the numbers of landing craft, helicopters, and surface craft available for use and the exact personnel and equipment that will be loaded on each, along with embarkation and landing times. These documents should be incorporated in annexes to operation and administrative plans and orders. The body of the landing plan is usually short, with only information of interest to all subordinate units. The bulk of the plan is a compilation of documents included as tabs and enclosures that contain the facts and figures essential for the orderly and timely execution of the landing. For those types of amphibious operations other than amphibious assaults, the CATF and CLF may not need to develop or utilize all of the documents for the landing plan shown in Figure IV-7.

b. The landing plan establishes relative landing priorities among the various elements of the LF and with overall coordination of ship-to-shore movement planning. Specifically, it provides:

(1) Priority for landing of elements of the LF.

(2) Allocation of resources.

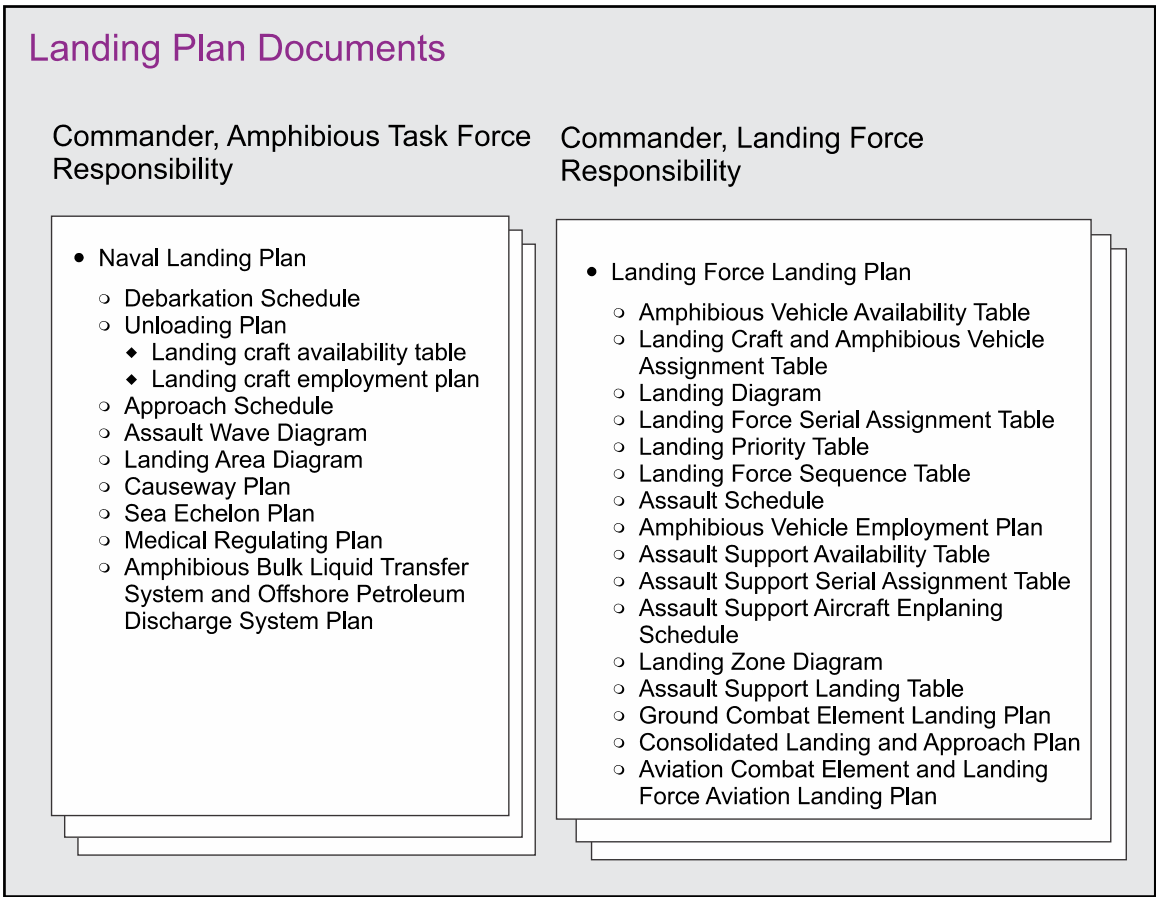


Figure IV-7. Landing Plan Documents

(3) Allocation of landing serial numbers.

(4) Sequence for landing of nonscheduled units.

(5) Coordination of the landing plans of separate landing groups, if required.

c. Landing plan documentation is a responsibility of both CATF and CLF. Although some documents require joint preparation by ships' commanding officers and commanding officers of troops, all landing plan documents are the responsibility of either the CATF or CLF.

d. After the means for ship-to-shore movement have been assigned, LF plans are prepared in the following sequence:

(1) CLF allocates or specifies landing assets to subordinate elements on the basis of availability and in accordance with the CONOPS and scheme of maneuver ashore.

(2) CLF allocates blocks of landing serial numbers to elements of the force.

(3) CLF determines the relative landing priorities for the various elements of the force.

THE INVASION OF NORMANDY

The invasion of Normandy was without question the most important battle fought in western Europe in the Second World War. The Allies' success in landing their troops and securing a beachhead on June 6, 1944, doomed Hitler. The landings at Anzio only a few months earlier had shown that success was by no means certain. Amphibious landings were inevitably extremely risky operations.

Allied strategists meeting in Washington in May 1943, set the date for the cross-channel invasion of France as May 1, 1944. Due to a shortage of landing craft, however, the invasion date would be postponed from May to June 1944. Planning for the invasion had been going on since 1942. The raid at Dieppe had provided an early and disastrous dress rehearsal.

The Allies had decided in July 1943, that the Cotentin peninsula of Normandy offered the best location for the invasion. The Germans, who had 3,000 miles of coastline to defend, did not know where the invasion would come. They put up their heaviest defenses in the Calais region of the French coast. Nazi leaders disagreed on the most likely site for the invasion and on the strategy for employment of their forces.

In England, the troops who would land on D-day went through endless rehearsals for the invasion. In late May 1944, the rehearsals came to an end. Soldiers were confined to their quarters then shipped to concentration areas near ports and airfields from which they would depart. For security reasons, they were not told their ultimate destination. When they were safely at sea, they would finally be told they were headed to Normandy.

By the end of the day of June 5, 1944, over 2,500 ships carrying the Allied invasion force were heading toward the Normandy coast. More than 1,000 planes and gliders were being readied to carry the airborne troops into battle.

SOURCE: *World War II—America at War,* Maurice Isserman, 1991

(4) Subordinate LF elements prepare a plan for landing based on assigned tasks and priorities. Landing plans for other forces not landing with ground combat forces are submitted to the LF commander.

(5) The CLF consolidates these recommendations and publishes them in the LF landing plan.

(6) Planning for the movement of supplies ashore and for the levels of supply needed ashore is conducted concurrently with other ship-to-shore movement planning. If the CLF uses the option of employing floating dumps, planning should include the composition of the floating dumps.

US Soldiers of the 8th Infantry Regiment, 4th Infantry Division, move out over the seawall on Utah Beach (June 6, 1944).

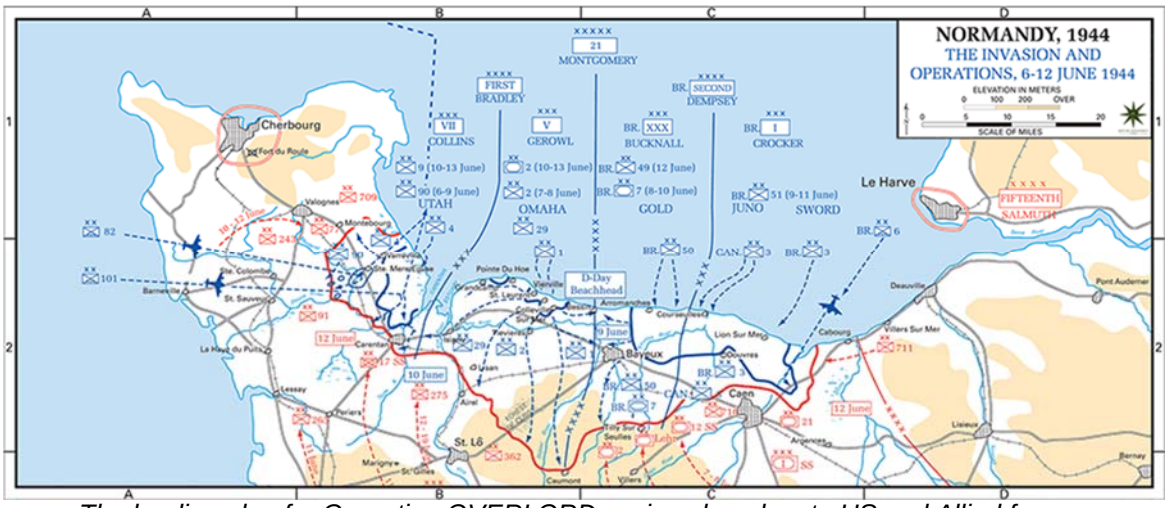
23. Commander, Amphibious Task Force, Documents

a. **The CATF develops the naval landing plan documents required to conduct ship- to-shore movement.** The information contained in several of these documents is vital to the CLF in the development of the landing plan. The naval landing plan organizes the landing area to facilitate the conduct and control of ship-to-shore movement of the LF and provides for medical regulating. It incorporates the unloading, landing control, medical regulating plans, and other naval documents prepared to support LF planning.

(1) The **landing craft availability table** is the basis for assignment of landing craft for the ship-to-shore movement. It lists the type and number of landing craft that will be available from each ship in the transport group, specifies the total required for ATF use, and indicates those available for troop use. It is prepared by the CCO.

(2) The **landing craft employment plan** provides for the assigned movement of landing craft from the various ships to satisfy ATF and LF requirements. It indicates the number of landing craft, their types, their parent ships, the ships to which they will report, the time at which they will report, and the period during which they will be attached. The plan is prepared by the CCO.

(3) The **debarkation schedule** is a plan that provides for the orderly debarkation of troops and equipment and emergency supplies for the waterborne ship-to-shore movement. Prepared jointly by the commanding officer of each ship and the commanding officer of troops embarked, it is usually prepared after the troops are aboard and is distributed



The landing plan for Operation OVERLORD assigns beaches to US and Allied forces.

to all personnel responsible for control of debarkation. The debarkation schedule may be accompanied by a ship's diagram depicting where LF units stage or muster for debarkation such as the hangar bay, upper or lower vehicle storage, side port areas, boat deck, or any other location onboard ship. Debarkation schedules are not normally prepared for units landing in AAV or aircraft. The debarkation schedule contains the following information:

(a) The sequence in which landing craft, by type, depart the well deck.

(b) The individual boats and boat teams or supply loads from each troop debarkation station and the boats into which they are loaded.

(4) The **unloading plan** establishes the sequence and designates the means for off-loading the LF. It consists of the landing craft availability table and the landing craft employment plan.

(5) For each **colored beach**, the assigned PCO prepares the approach schedule to indicate the time of departure from the rendezvous area, LOD, and other control points and time of arrival at the beach for each scheduled wave.

(6) The **assault wave diagram** displays the assault waves as they will appear at a specified time prior to H-hour. The diagram is prepared by the PCO for each colored beach.

(7) The **landing area diagram** is prepared by the CATF and is generally delegated down to the PCO and shows graphically all the details of the landing area, sea echelon, and outer transport areas if used; the approach lanes; the inner transport area; the LCAC routes, routes, and areas (includes CLAs, LCAC departure points, LCAC control points, LCAC penetration points, and CLZs); boat lanes with their LODs; beaches; AAV launching areas; causeway launching areas (if used); and FSAs.

(8) **Causeway Plan.**

(a) Depending upon the OPLAN/OPORD being supported, afloat prepositioning download may follow an amphibious assault as augmentation or reinforcement. Causeway capabilities may arrive to support the AF through MPF or joint logistics over-the-shore (JLOTS) assets. The mission and appropriate command relationship guidance will be included in the amphibious operation initiating directive. The CATF works closely with the commander, MPF, and/or in coordination with JLOTS forces to develop a causeway plan for the AFOE as a part of the naval landing plan if required.

(b) The plan should include details on loading, transportation, launching, initial operational assignment, and provisions for maintenance and salvage of the causeway and lighterage equipment. It should also contain specific instructions for transition of control. The plan should include provisions for retaining lighterage in the area after the AFOE shipping departs, for use in unloading follow-up shipping, and for other support of tactical operations.

More information on JLOTS and MPF is included in Chapter X "Sustainment;" JP 4-01.6, Joint Logistics Over-the-Shore*; and NTTP 3-02.3M/MCTP 13-10D,* Maritime Prepositioning Force Operations.

24. Commander, Landing Force, Documents

a. **The CLF prepares the LF landing plan.** It is the compilation of detailed plans prepared by the LF. The following documents designate the forces going ashore and promulgate the means, organization, sequence, and landing priorities:

(1) The **amphibious vehicle availability table** lists the number and type of vehicles available for the landing, the LF units embarked in them, and the ships carrying them.

(2) The **landing craft and amphibious vehicle assignment table** indicates the organization of LF units into boat spaces and boat teams and the assignment of boat teams to scheduled waves, on-call waves, or nonscheduled units. It may also include instructions for assigning floating dump supplies to landing craft or amphibious vehicles. The table, together with the debarkation schedule, furnishes the ship's commanding officer with information for debarking troops and floating dump supplies. The landing craft and amphibious vehicle AAV assignment table is prepared and promulgated at the same time as the landing diagram.

(3) The **landing diagram** graphically shows the tactical deployment of boat teams in scheduled waves. It provides the wave composition, showing AAVs and landing craft and touchdown times for a colored or numbered beach. The landing diagram is prepared by a representative from the GCE based on recommendations from subordinate commanders and promulgated concurrently with the landing craft and amphibious vehicle assignment table. It is distributed to all personnel responsible for controlling the formation of the boat group and its waves during ship-to-shore movement and the information it contains is used in the preparation of assault schedules.

(4) The **LF serial assignment table** reflects the organization of the LF for ship-to-shore movement. It indicates the tactical units, equipment, and supplies that are to be loaded into each landing craft, amphibious vehicle, or aircraft and may be further broken down into a serial assignment table (surface) and a heliteam wave and serial assignment table. A landing serial is a group of LF units and their equipment that originate from the same ship and that, for tactical or logistic reasons, will land on a specified beach or LZ at the same time. A landing serial number is assigned to each serial (group). Landing serial numbers are administratively assigned numbers and do not in themselves prescribe a priority in landing. They are assigned only for reference purposes, and the assignment in no way precludes the use of code names, designations, or unit titles when expedient.

(a) Early in the planning stage, the CLF allocates a block of consecutive landing serial numbers on the basis of administrative organization to each LF unit and Navy element to be landed, regardless of their location in the AE or AFOE. Allocation begins at the highest echelon as each unit allocates a consecutive portion of its block to subordinate units. Allocation continues until each element within the LF has a block of consecutive numbers for assignment to its subordinate and attached elements.

(b) After the landing and embarkation plans have been determined, each planning echelon assigns landing serial numbers from its allocated block to its units, parts of units, or groupings. While allocation of blocks of landing serial numbers to units is based on the administrative organization, the actual assignment of individual landing serial numbers is based on the organization for landing. The method of assignment does not depend either on the priority or on the estimated sequence of landing of nonscheduled units.

(5) The **landing priority table** is a worksheet used at the LF level to prescribe the planned buildup of the LF ashore. It is based on the commander's tactical plan and provides a foundation for the orderly deployment of the LF in support of the plan. The table lists all major units to be landed, the order or priority, the planned time of landing, and the designated beaches and LZs. It is used principally when the LF is complex or when a phasing of LF units is required.

(6) The **LF landing sequence table** is a complete list of the estimated landing sequence of the nonscheduled units of the LF. It is the principal document prepared by the CLF for executing and controlling the ship-to-shore movement of these units and is the basis for their embarkation and loading plans. Unless specific requests for changes are made during the execution of ship-to-shore movement, the landing proceeds in accordance with the estimated sequence shown in the LF sequence table.

(7) The **assault schedule** prescribes the formation, composition, and timing of waves landing over each beach. The GCE prepares the assault schedule based on the recommendations of subordinate unit commanders.

(8) The **amphibious vehicle employment plan** shows the origin, number and type, wave, destination, and contents of amphibious vehicles in initial movement and subsequent trips from ship to the beach. The GCE develops this plan.

(9) The **assault support availability table** lists the helicopter and tiltrotor aircraft units, number available for first and subsequent lifts, their tentative load capacity, and the ships on which they are transported for a proposed landing. It is prepared by the helicopter and tiltrotor unit commanders.

(10) The **assault support serial assignment table** is prepared by the unit commander requiring air movement in coordination with the ship's commanding officer and ACE representatives. It indicates the tactical units, equipment, and supplies that are to be loaded into each heliteam by its assigned serial number and the serial number of the flight and wave. It lists the weight of personnel and equipment and includes all landing categories—scheduled and on-call waves.

(11) The **assault support aircraft enplaning schedule** shows the enplaning stations on the flight deck, sequence in which aircraft are spotted at the enplaning stations, and the serialized heliteam with equipment and supplies assigned to each aircraft in each designated flight. It plans for the orderly enplaning of troops, supplies, and equipment for the air ship-to-shore movement.

(12) The **landing zone diagram** illustrates the routes to and from LZs. It includes the transport areas, rendezvous points, approach and retirement routes, departure and initial points, other control points, LZs, and other details as are necessary for clarity. The diagrams are prepared by the senior helicopter or tiltrotor unit commander in coordination with the cognizant helicopter or tiltrotor transport unit commanders and are submitted via the chain of command to the CATF for approval and coordination.

(13) The **assault support landing table (ASLT)** is a detailed plan for the airborne ship-to-shore movement of troops, equipment, and supplies. It provides the landing timetable for helicopter and tiltrotor aircraft movement and indicates the assignment of specific troop units to specific numbered flights. Analogous to the assault schedule and landing sequence table prepared by surface-landed units, it is the basis for the aircraft unit's flight schedules and the control of helicopter and tiltrotor aircraft movement by the appropriate air control agency. The ASLT is prepared in close coordination between the commanders of the units needing air movement and the helicopter and tiltrotor aircraft units and with the AATCC, Navy TACC, and SACC.

(14) The **GCE landing plan** is developed by the senior GCE representative who does the major portion of the detailed planning and immediate supervision of the surface and air ship-to-shore movement on the part of the LF. It is developed in coordination with the related Navy organization and based on information provided by both the CATF and CLF concerning forces to be landed and landing assets available. Subordinate units down to the battalion level prepare their own landing plans, including all relevant documents. These plans may be incorporated into the landing plan of the next higher unit as an appendix or the information contained in the documents incorporated in the documents of the GCE landing plan.

(15) The **ACE and LF aviation landing plan** outlines the commander's plans for establishing aviation units ashore in the landing area by both air and surface means. It

provides detailed plans for the landing of aviation elements that are embarked in amphibious warfare ships and landed with assault units or as nonscheduled units.

(a) The aviation landing plan contains the following:

1. Plans for the echelonment and landing sequence of all aviation units to be established ashore within the landing area.

2. Detailed landing documents for aviation elements that move ashore before general unloading.

3. Applicable ship-to-shore control provisions.

4. Information on causeways, bulk fuel handling systems, and the landing of engineers and ground equipment necessary for aviation support ashore.

(b) Elements of air control squadrons and helicopter groups comprising the first echelon are landed by helicopter to initiate operations ashore. The second echelon of these units is landed over the beaches with the heavy equipment and personnel required for sustained operations.

1. Fixed-wing fighter and attack groups land in an initial echelon composed of personnel and heavy equipment for base operations and maintenance. This echelon is surface-lifted into the landing area and landed over the beaches. A second echelon composed of pilots, aircraft, and crew is flown into the area from land bases.

2. The LF ACE organization for landing may appear different from the task organization because of the division of air groups and squadrons into elements for landing and wide variation in the time and method of landing these elements. The landing plan provides for a grouping of the aviation elements into a series of echelons based on time and method of landing. These echelons, and the time and manner of their movement to the landing area, are shown in the general paragraph in the body of the aviation landing plan. Detailed composition of echelons is in a separate appendix to the OPLAN or OPORD.

(c) Air control units, elements of the LF aviation headquarters squadrons, aviation groups, headquarters support squadrons, air base, and aviation logistics squadrons may be landed before commencement of general unloading to initiate establishment of air facilities ashore. These units are either embarked with and landed as part of the assault division(s) or are landed as nonscheduled units.

1. Detachments of the aviation units and the LCEs that form part of the helicopter support teams are often landed in scheduled waves. Air support radar teams usually will be landed in on-call waves. Such elements are shown in the assault schedules (or ASLT and helicopter and tiltrotor aircraft wave and serial assignment table) of the division(s). Other aviation elements that are landed early in the ship-to-shore movement are serialized and shown in the division or LF landing sequence table.

2. The LF aviation landing plan lists separately those aviation elements that are landed in scheduled, on-call, or nonscheduled units. The landing plan also contains additional landing documents, as extracted from division and force landing plans, necessary to describe the method and sequence for landing these elements. This information is shown in the following enclosures:

a. Extracts from appropriate assault schedules.

b. Extracts from helicopter and tiltrotor aircraft employment in the ASLTs.

c. Extracts from helicopter and tiltrotor aircraft waves in the assault support serial assignment tables.

d. Serial assignment table.

e. Landing sequence table.

(d) **Airfields, Causeways, Bulk Fuel-Handling Systems, and Engineering Operations.** The availability of operational facilities required to establish aviation ashore determines the time of landing aviation elements. Depending upon the timeline for establishing an airfield ashore and the scope of aviation-related engineer work, additional LF engineer units may be landed to augment the ACE. Information on the projected dates when these facilities will be complete, or engineering work will begin, is provided in the landing plan when available. This information includes estimated dates for:

1. Airfields achieving operational status.

2. Installation of causeways for landing heavy aviation assets.

3. Completion of bulk fuel-handling systems from the beach to the airfields or helicopter operating sites.

4. Landing of engineers and commencement of work on airfields.

(16) Serial numbers for nonscheduled aviation elements are allocated by the LF. The assigned landing serials and an itemized list of personnel and equipment of aviation elements that are to land in scheduled or on-call waves are submitted to the CLF for coordination and approval. The division is then furnished the necessary information to provide for landing nonscheduled aviation elements. These elements are incorporated into the force landing sequence tables.

See NTTP 3-02.1M/MCTP 13-10E, Ship-to-Shore Movement*, for further detailed discussion on the landing plan.*

SECTION F. OTHER PLANNING CONSIDERATIONS

25. Overview

When developing the overall plan for an amphibious operation, other planning considerations, such as those associated with supporting functions, should be considered. They are the enablers that support execution, such as fire support, protection, intelligence, communications, and logistics/sustainment. Fire support is discussed in detail in Chapter VII, "Fire Support;" protection in Chapter VIII, "Protection;" intelligence and communications in Chapter IX, "Intelligence and Communication;" and logistics/sustainment in Chapter X, "Logistics." Additional planning considerations also include operations in CBRN environments, EMS operations, and cyberspace operations.

26. Operations in Chemical, Biological, Radiological, and Nuclear Environments

a. **General.** The threat of use or employment of CBRN weapons, or the potential presence of accidentally released toxic industrial materials and chemicals, poses unique challenges for AFs when planning and conducting amphibious operations. Most of the associated challenges stem from the unpredictable nature of the coastal and atmospheric environments, the nature of amphibious warfare ships' infrastructures, the availability of assets to counter these hazards or threats, and the difficulties of operating in a CBRN-contaminated environment. AF commanders and staffs should carefully assess the potential risk of an enemy employing CBRN weapons against an amphibious operation, including the use of persistent chemical agents to secure the flank or deny use of terrain. Planners should maintain a clear understanding of potential CBRN threats and hazards within their operational area and include measures to minimize associated AF vulnerabilities.

b. **Responsibilities. The AF needs to be capable of efficiently and effectively continuing its operations in a CBRN threat environment.** Within the AF, the CATF is ultimately responsible for CBRN defense of the forces afloat, including the LF while embarked. The CLF is responsible for CBRN defense of the LF once ashore. Detailed coordination between the CATF and CLF for the transition of responsibility of contaminated personnel and equipment is imperative.

c. **Planning Considerations.** AF commanders address potential CBRN threats and hazards during the planning phase.

(1) CBRN defense-related plans may include provisions for the following:

(a) Requests for supporting operations to eliminate or reduce an enemy's CBRN capabilities within the operational area prior to the arrival of the AF.

(b) Plans for amphibious advance force operations to further degrade an enemy's CBRN capabilities and to detect contaminated areas that may interfere with the CONOPS.

(c) Offensive and defensive preparations taken by the AF to minimize the vulnerability to and mitigate the immediate effects of a CBRN attack.

(d) The AF must all be well-versed in the processes, risks, and limitations of LF re-embarkation when CBRN contamination has occurred during an amphibious operation. The introduction of CBRN-contaminated material to the ATF should be minimized by conducting decontamination before re-embarkation and limiting the number of ships that receive contaminated equipment. Additional guidance is provided in Chapter VI, "Action Phase."

(2) The joint intelligence preparation of the operational environment (JIPOE) process should address the capabilities and limitations of an adversary's offensive CBRN capabilities, including associated delivery systems, their C2 and release procedures, and indicators of intent to employ these weapons. The AF commanders should provide target planning and execution guidance for conventional weapons use and consult with US Special Operations Command, US Cyber Command, the Joint Warfare Analysis Center, and the Defense Threat Reduction Agency for use of other capabilities to create the desired effects needed against an enemy employing CBRN weapons. Toxic industrial material within the operational area should be located and characterized as it can produce similar effects.

(3) The principles of CBRN defense should be factored into planning to specifically address avoidance of CBRN hazards, particularly contamination, protection of individuals and units from unavoidable CBRN hazards, and required decontamination procedures to restore operational capability. Application of these principles helps to minimize vulnerabilities, protect the AF, and maintain the operating tempo to achieve the AF objectives.

(4) CBRN contamination avoidance prevents the disruption of the amphibious operation by eliminating unnecessary time in elevated protective postures and minimizing decontamination requirements. Avoiding contamination requires the ability to recognize the presence or absence of CBRN hazards in the air and on water, land, personnel, equipment, and facilities, at both long and short range. Supporting and amphibious advance force operations should provide for long-range surveillance and detection capabilities focused on areas such as the landing beaches, LZs, LF objectives, and the AF objectives. Pre-assault operations and actions taken throughout the remainder of the amphibious operation should provide for short-range surveillance and detection capabilities in support of the LF units operating ashore and ATF ships within the sea echelon area.

(5) **CBRN Protection.** Specific actions required of the ATF and LF before, during, and after WMD attacks should be clearly communicated and rehearsed. CBRN protection conserves the force by providing individual and collective protection capabilities essential to mitigating the effects of CBRN hazards. Protecting the force from CBRN hazards may include preventing or reducing individual and collective exposures and applying medical prophylaxes. Individual protection also includes measures to protect equipment, vehicles, and supplies.

(a) Commanders should adopt a mission-oriented protective posture (MOPP) for the AF that establishes flexible force readiness levels for individual CBRN protection, provides the force with pre-treatments and immunizations as required, and has adequate antidotes and other medical treatments available to enable their forces to survive the effects of the CBRN hazard. MOPP analysis (the process of determining a recommended MOPP) integrates CBRN protection requirements—derived from CBRN threat assessments—with mission requirements. MOPP enables commanders to adjust their force's protective posture based on the threat of imminent attack or the CBRN hazards present and then prosecute the mission with confidence. The required protective posture may range from as low as having individual protective equipment (IPE) readily available to as high as wearing the full personal protective ensemble. Providing individual protection in an environment susceptible to wave action and associated seawater infiltration is even more challenging. Mission performance of personnel will suffer from wearing IPE over time. Associated heat stress will be increased further if other waterproof gear is worn over IPE. Also, IPE effectiveness degrades over time. The ATF and LF personnel manning flight decks, well decks, and landing craft, as well as those operating ashore (e.g., beachmaster units), require IPE and must be capable of operating in MOPP levels commensurate with the threat. Likewise, individual equipment, vehicles, and supplies gain considerable protection from deployed protective covers. These covers may be as simple as thick plastic sheathing and provide immediate protection against large-scale use of liquid chemical agents.

For additional information on individual protection, see JP 3-11, Operations in Chemical, Biological, Radiological, and Nuclear Environments; *NTTP 3-20.31,* Surface Ship Survivability*; Naval Ships Technical Manual Chapter 070,* Nuclear Defense at Sea and Radiological Recovery of Ships After Nuclear Weapons Explosion; *and the library of multi-Service TTP the Services have collectively developed on various aspects of CBRN defense.*

(b) Sustaining operations in CBRN environments may require collective protection equipment, which provides a toxic-free area for conducting operations and performing life support functions such as rest, relief, and medical treatment. When collective protection is not available ashore, plans are developed, exercised, and evaluated to move personnel away from contaminated areas ashore.

(6) When contamination avoidance is not possible, decontamination supports the post-attack restoration of the AF and the resumption of operations to a near-normal capability. Decontamination is conducted to reduce or eliminate the hazard risk to personnel and to make equipment serviceable. Because decontamination is labor and logistic intensive and assets are limited, the AF commanders prioritize requirements and decontaminate only what is necessary. Multiple decontamination sites may be required throughout the AOA/AO to reduce reaction times. Decontamination is organized into four categories that reflect operational urgency: immediate, operational, thorough, and clearance. The AF uses immediate and operational decontamination to the maximum extent possible until the AF objectives are secured to maintain operational tempo. Thorough decontamination is normally conducted in the rear area, beyond the range of enemy direct-fire systems. It is conducted during an operational pause, following the

completion of an operation, and preferably prior to recovery to a ship. Clearance decontamination provides decontamination to a level that enables unrestricted transportation, maintenance, employment, and disposal. It prepares organizations or individual units for return to their home garrisons. It involves those actions required to bring contaminated items into full compliance with national work and occupational hazard standards. Clearance decontamination is conducted after hostile actions have terminated, when the commander determines it is in the unit's best interest, or when directed by higher authority. It involves factors such as suspending normal activities, withdrawing personnel, and having materials and facilities not normally present to the AF.

27. Electromagnetic Spectrum Operations

a. All information-related mission areas increasingly depend on the EMS. JEMSO, consisting of EW and joint EMS management operations, enable EMS-dependent systems to function in their intended operational environment. EW is the mission area ultimately responsible for securing and maintaining freedom of action in the EMS for friendly forces while exploiting or denying it to threat. The proper execution of joint EMS management operations enables the commander to C2 forces, gather intelligence, execute fire missions that create lethal and/or nonlethal effects, conduct movement and maneuver, and protect and sustain the force. All of these functions are accomplished in a dynamic environment and require continual planning, coordination, and management of the EMS to ensure the full complement of capabilities is at the commanders' disposal.

b. Once the allotted EMS has been allocated to support specific forces or systems in the AOA, it is no longer available for use. EMS can, however, be reallocated or reused, depending on distance and power between emitters. The CATF and CLF should conduct an operational assessment of the impact of sacrificing one potentially critical capability to use another.

c. The AF should resolve electromagnetic interference daily.

d. EW planners should coordinate their planned activities with other activities that may use the EMS. EW activity may create effects within and throughout the entire EMS and cannot be limited to the AOA. AF EW planners should closely coordinate their efforts with those members of the joint force who are concerned with managing military EMS use in the AOR.

e. For the LF, the EW coordination cell can be used to support planning and operations.

See JP 6-01, Joint Electromagnetic Spectrum Management Operations*, for more information regarding joint EMS management operations.*

For more information on the EW coordination cell, see JP 3-13.1, Electronic Warfare.

28. Cyberspace Operations

Many aspects of modern amphibious operations depend upon secure access to cyberspace. The JIPOE should address the capabilities and limitations of threat to cyberspace capabilities. The AF commanders should consult with appropriate JFCs to plan for the full extent of available actions to create the desired effects needed against a threat employing cyberspace capabilities.

See JP 3-12, Cyberspace Operations*, for additional information on offensive and defensive cyberspace operations.*

CHAPTER V
EMBARKATION, REHEARSAL, AND MOVEMENT

Aptitude for war is aptitude for movement.

Napoleon I: Maxims of War, 1832

SECTION A. EMBARKATION PHASE

1. Overview

a. **General.** The embarkation phase is the period during which the forces, with their equipment and supplies, are embarked in assigned ships. The primary objective of this phase is the orderly assembly of personnel and materiel and their embarkation in a sequence designed to meet the requirements of the LF CONOPS ashore. Embarkation of the AEs and AFOEs will be in accordance with the approved embarkation orders and plans. Embarkation planning involves all the measures necessary to ensure timely and effective loading and employment of the AF.

b. Ship requirements for the AE and AFOE must be determined as early as possible in the planning phase so all echelons of the LF may proceed with detailed planning. Initially, tentative requirements are determined and, as planning proceeds and more specific information becomes available, requirements are refined and ship requirements confirmed. Critical to planning is an understanding of the embarkation requirements and amphibious warfare ships' capacities. The six categories of embarkation requirements for ships utilized in an amphibious operation are personnel, square feet, cubic feet, aircraft spots, landing craft spots, and bulk liquids. In addition to the six categories, weight and height should also be considered when determining ship requirements. Broken stowage and related broken stowage factors are also applied as appropriate. Not all square footage will be available for various reasons, including allowing room between vehicles for movement of personnel, vehicles and cargo too large to fit in all the available space, and the requirement to gripe or tie down vehicles. The broken stowage factor is a percentage of the total space that is available. Planners should apply a 63 percent broken stowage factor to vehicle spaces and a 75 percent broken stowage factor to cargo spaces to determine stowable area aboard any class ship (less well-deck space).

c. Embarkation characteristics include:

(1) **Mutual Effort.** Embarkation is conducted by both the ATF and LF. Proper embarkation depends, to a large extent, on the mutual understanding of objectives and capabilities and full cooperation in planning and execution. Throughout planning and execution of the amphibious embarkation, the LF staff works in concert with its ATF counterparts.

(2) **Degree of Flexibility.** Ideally, units embarked for combat should be loaded to allow the greatest flexibility in landing at the objective area. The organization for

embarkation of the LF must be compatible with the plan for the ship-to-shore movement, which in turn must support the scheme of maneuver ashore.

(3) **Rapid and Effective.** A characteristic of successful amphibious operations is the manner in which forces are established ashore. In a forcible entry operation, the power and size of the LF must be expanded in its application to the maximum extent necessary to carry out its mission in the shortest possible time. This expansion requires a rapid, yet orderly, buildup and throughput of troops and materiel, which depends in large measure on the manner in which the ships have been loaded. Thus, depending on the operations, there is a balance that planners should consider between buildup and effective throughput to that of the degree of flexibility, which is needed to complete the operation.

2. Responsibilities

The embarkation responsibilities for the CATF, CLF, other commanders, and external agencies are as follows:

a. The CATF:

(1) Exercises overall control and general supervision of the execution of embarkation in accordance with the embarkation schedule and loading plans.

(2) Provides communication facilities required afloat, including adequate counterintelligence and security measures.

(3) Coordinates with port authorities or host nation and the LF to develop an integrated force protection plan for security of the ATF in the embarkation area.

(4) Requests required amphibious warfare ships and AFOE ships as needed (if not enough ships are in the ATF) upon receiving the CLF's ship requirements for embarkation, and then sub-allocates ships to the LF for embarkation.

(5) Organizes Navy forces for embarkation and provides information to CLF for the organization for embarkation and assignment to shipping (OE&AS).

(6) Prepares movement orders for ships and coordinates with the CLF, control of embarkation, and movement to marshalling and embarkation areas and embarkation points, in accordance with embarkation schedule.

(7) Approves the LF embarkation and the amphibious and transport movement groups' loading plans as reflected in the OE&AS.

(8) Advises the CLF on Navy support forces' embarkation requirements, for example, helicopter detachments, explosive ordinance disposal teams, SOF, and naval beach group requirements (e.g., assault craft units and beachmaster units).

b. The CLF:

(1) Prepares the LF for embarkation.

(2) Determines LF requirements for amphibious warfare and AFOE ships.

(3) Develops LF OE&AS.

(4) Determines embarkation support requirements, including requests for loading assistance required from forces afloat. Loading requirements for hazardous materials and ammunition (in terms of classes and associated net explosive weights) should be specified.

(5) Prepares detailed embarkation and loading plans to inform OE&AS.

(6) Moves embarking units to and within marshalling and embarkation areas, and assembles cargo and personnel on shore in accordance with the embarkation schedule and loading plans.

(7) Coordinates with the CATF and external agencies as prescribed by higher authority to provide force protection within the marshalling and embarkation areas.

(8) Provides an embarkation control officer ashore for coordination and control of embarkation evolutions with the CATF, ship representatives, and/or outside agencies.

(9) Provides for communications ashore for movement from home stations/bases through to the embarkation area, including adequate communications security measures. To conserve organic LF communications equipment to be embarked, additional equipment should be available to satisfy all requirements. Where possible, arrangements should be made with the commander of the area in which embarkation is to take place to provide communications support as able.

c. Other commanders should:

(1) Provide for transportation and materials handling equipment (MHE) requirements.

(2) Organize units for embarkation.

(3) Participate in embarkation planning meetings.

d. **External Agencies.** Agencies external to the ATF and LF may be given responsibilities by higher authority. Such responsibilities are to:

(1) Specify and make available required marshalling areas, mounting areas, embarkation areas, and embarkation points and developing and operating facilities therein.

(2) Provide authorized supplies and services to the ATF, including supplies to be loaded and communications facilities for use during embarkation.

(3) Coordinate and control administrative movements within the embarkation areas.

(4) Provide force protection support and develop foreign counterintelligence information for embarkation areas.

(5) Provide the proper loading equipment, technical assistance, stevedores, and other loading aids for each embarkation point.

3. Organization

a. The organization for embarkation is a temporary task organization that accounts for each element of the AF and other forces that may originate from several locations and require both sealift and airlift support. It conforms to the circumstances of the deployment and the requirements of the expected tactical situation. On completion of the embarkation phase, these task organizations dissolve. Amphibious warfare ships and other ships are assigned to counterpart tactical amphibious and transport groups for movement of the LF to the AOA or AO. The number and types of ships assigned to each group is determined by the size and composition of the LF organization for embarkation. For forward-deployed ARGs and MEUs, embarkation occurred when the ARG completed onload prior to deployment; however, reorganization and load reconfigurations may be necessary to support specific operations.

(1) **LF Organization.** The LF's embarkation organization consists of embarkation groups, units, elements, and teams as shown in Figure V-1. The embarkation group is the largest LF organization, and the embarkation team is the smallest subordinate organization capable of planning and executing embarkation. The embarkation unit is usually formed to bridge the gap between the group and team organizations. The embarkation element is organized only when a complex situation requires additional organizations for control in planning and execution of embarkation.

(2) **ATF Organization.** Corresponding echelons are formed within the ATF, which are amphibious and transport movement groups, transport units, transport elements, and individual ships as shown in Figure V-2. The amphibious and transport movement group(s) provide for the embarkation, movement to the objective, landing, and logistics in support of the LF. Initially, the amphibious and transport movement groups are a planning organization. As the landing plan, which is developed from the scheme of maneuver ashore, is validated, ships are allocated and organized into task units and elements as required to support the LF.

b. **Ship Allocation.** Upon receiving the CLF's ship requirements for embarkation, the CATF requests required amphibious warfare ships and AFOE ships as needed, if there are not enough within the ATF. The CATF may need to request additional ships through the JFC or JFMCC. United States Transportation Command (USTRANSCOM) may allocate strategic sealift to the CATF for the AFOE. The CATF, in turn, sub-allocates AE and AFOE ships to the LF. The CLF then sub-allocates the ships for embarkation in the

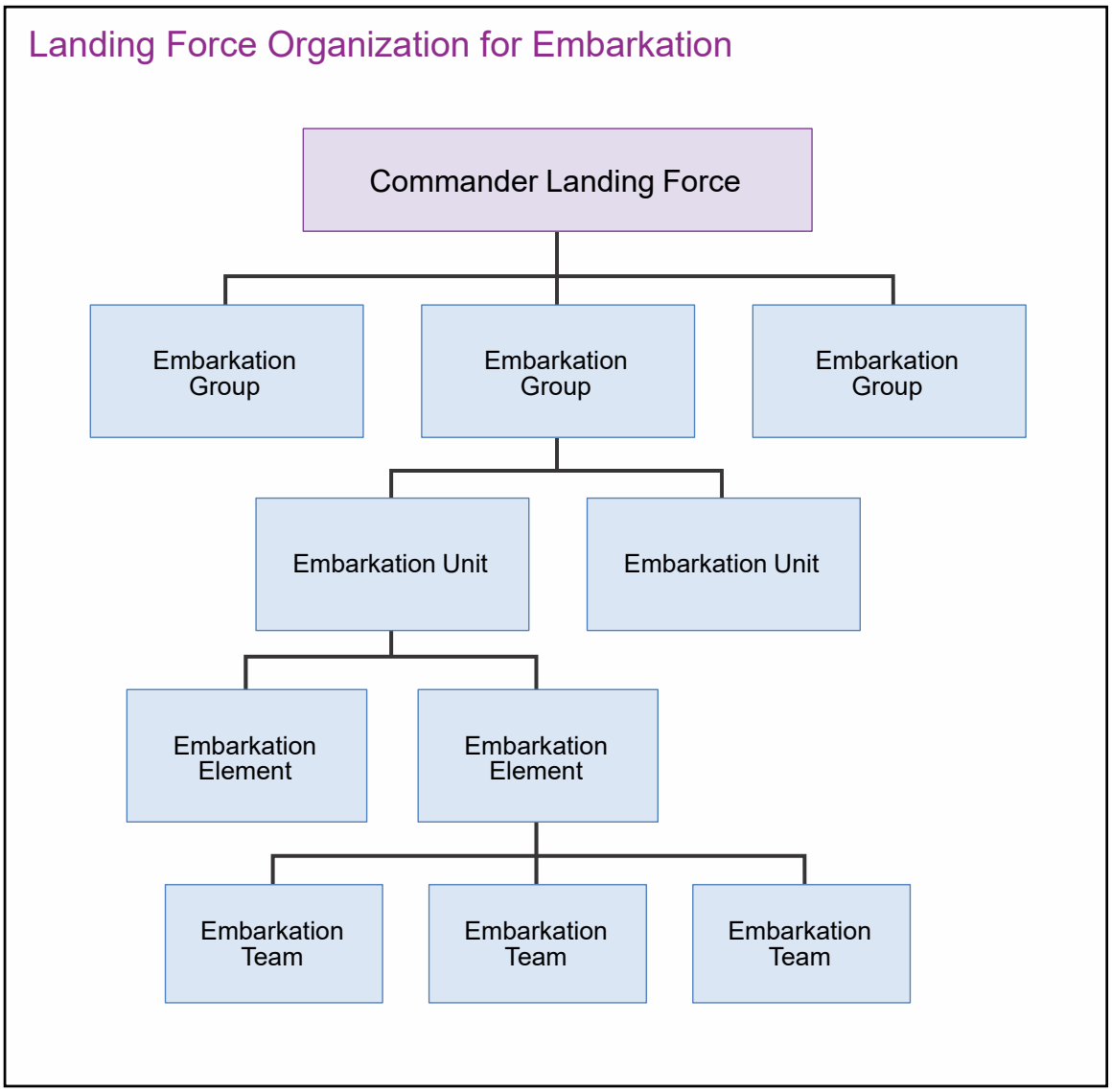


Figure V-1. Landing Force Organization for Embarkation

form of a published OE&AS worksheet. Development of the OE&AS can be done by two methods:

(1) Sub-allocate the ships for embarkation to embarkation groups, which would, in turn, sub-allocate the ships to subordinate embarkation echelons and so on down to the embarkation team level.

(2) Sub-allocate the ships for embarkation to all embarkation echelons down to and including the embarkation teams. Detailed allocation of ships may be necessary at the LF level when compositing a MAGTF, joint, or multinational LF. Only the LF level has all the information concerning the entire force.

c. **Embarkation and Combat Cargo Officers.** To support embarkation, USMC mobility officers specially trained to plan and supervise loading for an amphibious operation are assigned to the ATF staff, the LF staff, and most amphibious warfare ships.

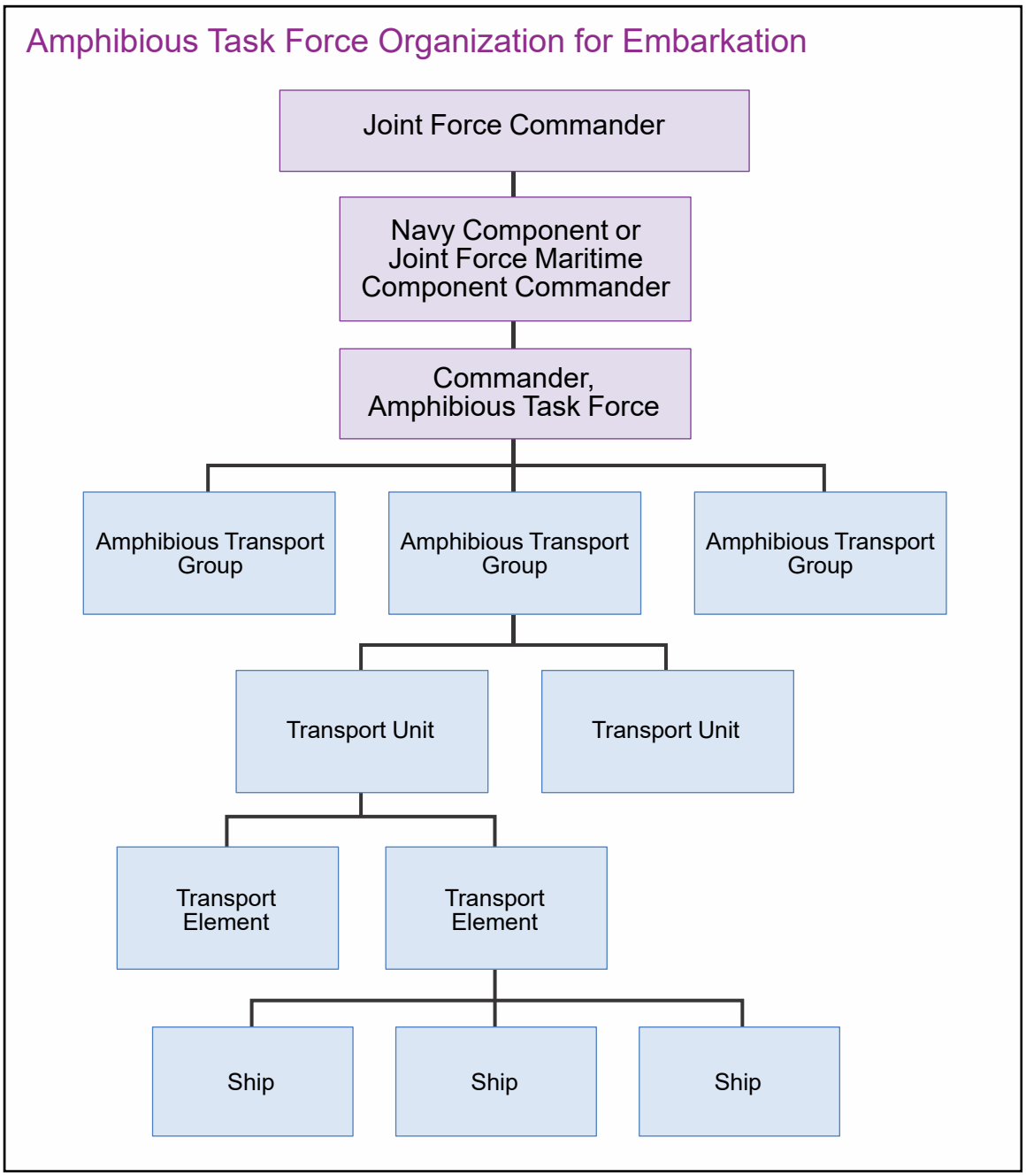


Figure V-2. Amphibious Task Force Organization for Embarkation

In the LF, these mobility officers are referred to as embarkation officers. The LF embarkation officers advise and assist their respective commanders in planning the embarkation and supervising its execution. The CATF and CLF must coordinate plans for embarkation of naval attachments; this coordination will result in these units being placed in the embarkation plan by the appropriate embarkation officer. The embarkation officers of the LF maintain continuous liaison with their counterpart combat cargo officers assigned to billets within the ATF. Combat cargo officers are permanently assigned to amphibious warfare ships or naval staffs as an advisor to and representative of the naval commander in matters pertaining to the embarkation and debarkation of troops, their supplies, and

equipment. Figure V-3 shows the parallel corresponding relationship of combat cargo officers and embarkation officers at each echelon level.

4. Embarkation Planning

a. **Overview.** The goal is the timely and effective loading of ATF assets starting on E-day. Key to the success of this effort is the close working relationship that must exist between LF operations and logistics officers and their Navy counterparts. The movement, assembly, and embarkation of the LF relies principally on jointly developed detailed plans and schedules that fully support approved AF embarkation plans. The development of these detailed and comprehensive embarkation and staging plans is a mutual responsibility of the CATF, CLF, naval forces, and external supporting agencies. The landing plan and OE&AS provide the operational direction the embarkation and combat cargo planners require in order to arrive at a load planning solution. Other processes, such as determining overall ship requirements and embarkation schedules, also figure prominently in arriving at workable loading plans. Amphibious embarkation planning must begin early and proceed concurrently with all other planning; this cannot be overemphasized. It requires detailed knowledge of the characteristics, capabilities, and limitations of ships and their relationship to the personnel, supplies, and equipment to be embarked. It is important to note that the Navy support element to support MPS and other embarking organizations are considered part of the MPF, with the exception of the MPSRON staff. These organizations may impact berthing, cargo, and vehicle storage and should be considered in embarkation planning. Additionally, the AE and AFOE ships may require additional stevedores, crane

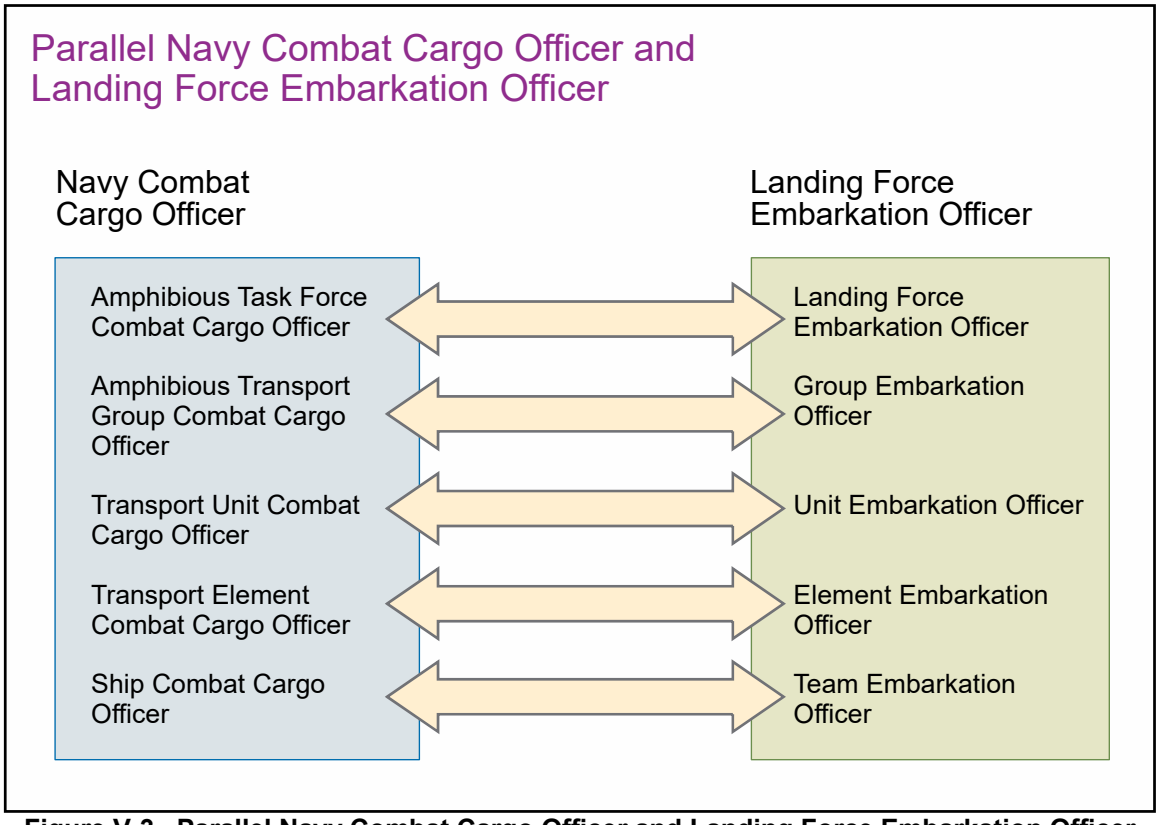


Figure V-3. Parallel Navy Combat Cargo Officer and Landing Force Embarkation Officer

operators, hatch teams, or other support personnel, which may be provided commercially or via a request for forces for military support (such as a Navy cargo-handling battalion, Navy expeditionary logistics regiment, or USA seaport operations company). The CLF places all requirements into the embarkation plan.

b. **Planning Sequence.** Following receipt of the initiating directive for the amphibious operation, LF embarkation planning begins at all echelons and proceeds concurrently. Major steps will overlap but are usually accomplished in the following general sequence:

(1) Liaison between the corresponding USN, USMC, and other forces (if so organized) is established by the CATF and CLF.

(2) Embarkation requirements of LF subordinate units are validated and consolidated by the CLF and are used to establish the LF ship requirements to support the force echelonment (AE and AFOE) as determined by the CLF and submitted to the CATF.

(3) The CATF obtains, from the naval forces and other forces that will be embarked in addition to the LF, embarkation requirements (e.g., berthing, square feet, cubic feet, aircraft spots, landing craft spots, and bulk liquids) and provides these requirements, with recommended locations and echelonment, to the CLF for inclusion in the LF assignment to ships.

(4) The CATF allocates ships to the LF and organizes these ships to satisfy the LF's organization for embarkation. Then the CLF allocates the ships to subordinate embarkation echelons. Ship allocations are reflected in the published OE&AS worksheet.

(5) Ship's loading characteristics pamphlets are distributed by the CATF to the CLF.

(6) The LF organization (to include attached naval units) for embarkation is established by the CLF in coordination with the CATF.

(7) The Navy organization for embarkation is established by the CATF in coordination with the CLF.

(8) Embarkation areas are selected and prepared by the CATF and CLF.

(9) The LF (to include attached naval units) marshalling areas are selected and prepared by the CLF.

(10) The control, security, communications, facilities, and MHE requirements for the embarkation phase (with consideration for force protection) are determined by the CATF and CLF.

(11) The berthing and loading schedule for the ATF ships is jointly developed and promulgated by the CATF and CLF.

(12) Movement schedules for LF (to include attached naval units) personnel, supplies, and equipment to the embarkation areas are developed by the CLF.

c. **Considerations.** The scheme of maneuver ashore is the central plan that drives the development of all other CATF and CLF plans. Embarkation is a result of the tactical plan (i.e., the scheme of maneuver ashore). Embarkation planning is objective-focused and developed by a reverse planning process—from objective to beach or LZ to ship to port of embarkation. In planning for embarkation, consideration must be given to the following, which will affect both landing plans and embarkation plans.

(1) **Mission of the AF.** The OE&AS must support the mission of the AF. It is dependent on the earliest promulgation of those parts of the OPLAN/OPORD impacting amphibious operations. This does not mean embarkation planners must wait for supporting plans to be completely developed. Embarkation planning must proceed concurrently with other planning.

(2) **Limiting Dates of the Embarkation, Rehearsal, Movement, and Action Phases.** The timeframes for these phases as reflected in the time-phased force and deployment data establish dates against which embarkation planning and execution must proceed. The determination of the date for E-Day is a critical starting point for embarkation planning.

(3) Size and characteristics of the forces involved, both LF and naval, to include availability and characteristics of ships and quantity and types of materiel to be embarked. Use of the minimum number of ships necessary to meet the requirements is an objective of embarkation planning. Units of the LF not required initially in the assault phases, or whose employment is deferred, should be loaded and dispatched so that arrival in the AOA or AO is scheduled to coincide with their contemplated employment. In the event there are an insufficient number of ships, planners must determine, based on the requirements of the amphibious operation, what equipment can be left behind at the unit's home base or station. This equipment is known as remain-behind equipment (normally associated with MEUs) or, in some cases, as cargo left on the pier.

(4) Availability of ship-to-shore movement assets, including manning, must be considered.

(5) LF commanders and their staffs should be embarked in the same ships as corresponding naval commanders. Many commands will want to be collocated with the CATF and CLF. Every effort should be made to collocate staffs to facilitate mission planning and execution.

(6) Embarkation areas and points must be selected, which can be influenced by:

(a) Available space on docks, piers, and beach loading areas.

(b) Time available for loading.

(c) Availability of suitable storage facilities.

(d) Adequacy of road and railway networks and space available for processing supplies and equipment brought into the embarkation areas.

(e) Availability of harbor services and other usable facilities, such as cranes, special slings and rigs for cranes, MHE, and pier ramps for stern gate loading.

(f) Availability of a suitably protected anchorage or roadstead.

(g) Suitability of beaches for the beaching of landing craft and for the operation of amphibious vehicles.

(h) Availability of adequate airfield facilities adjacent to, or within a reasonable distance of, the embarkation area.

(i) Availability of landing craft to support embarkation aboard ships at anchor or not otherwise accessible to pierside loading facilities.

(j) Availability or suitability of embarkation point to support staging, movement, and loading of ammunition, fuel products, and/or other hazardous or dangerous materiel.

(k) Adequacy of harbor size/type, entrance restrictions, channel depth, anchorage depth, and maximum size of vessel.

(l) Cost of embarking at pier versus loading over the beach, as well as weather considerations during the loading period.

(7) The feasibility and desirability of embarking personnel and equipment using helicopters.

d. **Embarkation Principles.** The following three principles drive embarkation planning:

(1) **Support the Tactical Plan.** Loading plans must support the scheme of maneuver ashore. Specifically, this normally includes the landing plan and the plan for landing supplies. Personnel, supplies, and equipment must be loaded in such a manner that they can be unloaded at the time and in the sequence required to support operations ashore. Therefore, the ship should be loaded in the reverse order specified in the landing plan. That is, the first equipment loaded is the last off-loaded, and the last equipment loaded is the first off-loaded.

(2) **Provide for Unit Self-Sufficiency.** Loading plans must provide for the highest possible degree of unit self-sufficiency.

(a) Personnel should not be separated from their combat equipment and supplies. Thus, weapon crews should be embarked in the same ship as their weapons, radio operators with their radios, drivers with their vehicles, and commanders and staff with their units.

(b) In addition, each unit should be embarked with sufficient combat supplies (prescribed and basic load) such as ammunition; petroleum, oils, and lubricants; water; rations; medical supplies; and radio batteries to sustain its combat operations during the initial period ashore.

(3) **Provide for Dispersion.** Loading plans must provide for dispersion of critical units and supplies.

(a) At echelons above elements, this can be achieved by dispersing critical units and supplies among several ships. This mitigates the potential results of the loss of one ship or a relatively few ships that could decrement combat capability that might jeopardize the overall AF mission.

(b) At the individual ship level, this can be achieved by dispersing critical supplies among several stowage compartments that do not share the same debarkation route. Individual ship dispersion militates against the loss of one debarkation route (e.g., crane, elevator), which might endanger the ship's capability to provide timely embarkation of critical supplies.

(c) Unit dispersion across several ships enables units to be off-loaded more quickly than if the unit is on one ship. This is because only one landing craft can load at a time per ship. Dispersion allows combat power to be loaded in parallel channels and to be built up more quickly ashore.

5. Loading and Stowage Considerations

a. **Types of Loading.** An understanding of the different types of loading methods used for amphibious operations is essential to inform ship allocations, assignments to ships, and ultimately safe and efficient execution of the plan. The general types of loading in amphibious operations are as follows:

(1) **Combat Loading.** Combat loading is a loading method that gives primary consideration to the facility with which troops, equipment, and supplies can be unloaded ready for combat rather than to economical use of ship space. Combat loading is the arrangement of personnel and the stowage of equipment and supplies in a manner designed to conform to the anticipated tactical operation of the organization embarked. Each individual item of equipment and supply must be stowed aboard the ship so it can be unloaded at the time and in the sequence that will most effectively support the planned scheme of maneuver ashore. Whenever possible, each ship must be loaded to provide maximum flexibility to meet changes in the tactical plan and facilitate discharge of cargo to meet emergency calls for equipment or supplies. The methods of combat loading may be employed, depending on the mission, organization, types of equipment assigned to the force (including ships), and the planned tactical employment of the force. These methods are as follows:

(a) **Combat Unit Loading.** Combat unit loading is the loading of an assault element of the LF, with its essential combat equipment and supplies, in a single ship, in such a manner that it will be available to support the tactical plan on debarkation. It

provides maximum flexibility to meet changes in the tactical plan and is the most common type of combat loading in embarkation load planning.

(b) **Combat Organizational Loading.** Combat organizational loading differs from combat unit loading as it is conducted without regard to tactical considerations on debarkation. It permits debarkation of complete units and equipment that will be available for tactical employment once ashore. This method is more economical in ship space than combat unit loading.

(c) **Combat Spread Loading.** Combat spread loading is a method for achieving the desired dispersion of LF personnel, equipment, and supplies among various ships and is commonly used when loading organizations are equipped with numerous vehicles and/or large amounts of heavy equipment. It also permits maximum flexibility and effectiveness in employment.

(d) **Loading for Selective Off-loading.** Loading for selective off-loading allows flexibility and capability to access and off-load vehicles, supplies, and equipment without having to conduct a major reconfiguration or total off-load. This may be influenced by the number and types of ships allocated and the space made available for the embarkation of the landing force.

(2) **Administrative Loading.** Administrative loading gives primary consideration to achieving maximum use of billeting and cargo space without regard to tactical considerations. Equipment and supplies must be unloaded and sorted ashore for further distribution and use. Administrative loading is not suitable for amphibious assaults.

(a) **Commodity Loading.** Commodity loading is a method of loading in which various types of cargoes are loaded together, such as ammunition, rations, or crated or containerized vehicles, so each commodity can be discharged without disturbing the others.

(b) **Selective Loading.** Selective loading is the arrangement and stowage of equipment and supplies aboard ship in a manner designed to facilitate issues to units.

b. **Types of Cargo.** Cargo to be loaded aboard ship is divided into four major groupings by physical configuration as follows: vehicles; standard cargo (individual items of equipment and cargo packaged in boxes and crates that can be carried, stacked, and otherwise handled without MHE); unitized cargo (items of equipment or supplies that have been grouped into larger packages to facilitate loading, off-loading, and transporting using available MHE such as forklifts, pallet jacks, cranes, and container handlers); and bulk petroleum, oils, and lubricants.

c. **Stowage Considerations.** Stowage is the method of placing cargo into a single hold or compartment of a ship to prevent damage or shifting. Although not an inclusive list, some of the specific stowage considerations can be broken down into the following:

(1) Method of stowage, which includes horizontal stowage (fore and aft distribution of unit equipment and supplies), vertical stowage (loaded in vertical columns

throughout the compartment so that items are available at any stage of the off-loading), and block stowage (stows cargo together for a specific destination).

(2) Non-vehicle cargo stowage for D-1 cargo (supplies and equipment issued to embarked forces prior to going ashore); critical supplies (CLF designated supplies for which an immediate need ashore is anticipated); ammunition; petroleum, oils, and lubricants; other hazardous cargo (materials include, but are not limited to, compressed gas and lithium batteries); vital supplies (CLF designated supplies that are vital to mission success); general cargo (all LF cargo not otherwise categorized); troop space cargo (cargo planned for stowage in those spaces designated for billeting and working aboard the ship); and mobile-loaded cargo.

(3) Vehicle stowage. As mentioned above, vehicle mobile loading is a key area of concern depending on the overhead height clearances of the ships' available vehicle stowage areas. Embarking units must use caution when planning secondary loads, especially non-reducible equipment as such configurations will constrain flexibility in terms of the ability to fit the vehicle in the most advantageous location aboard ship for the off-load.

(4) Factors to consider in combat loading include the loading of assault vehicles and critical supplies so no other cargo interferes with their accessibility and off-loading priority and broken stowage.

(5) Holds for MPF and MSC ships should be loaded and unloaded simultaneously, if possible, which permits the most efficient use of ship facilities and reduces loading and off-loading time. Loading and off-loading timetables, maintained by ship's personnel and based on past experience, provide a basis for planning balanced hold loads. Off-loading priorities and space limitations may result in one hold being loaded entirely with vehicles or heavy lifts. In this case, the fewer number of lifts would result in a shorter off-loading time.

(6) Landing serials. A landing serial number is a reference number assigned to each serial to identify each element of the LF and those Navy elements to be landed prior to general unloading. It is the direct link to the landing plan for unit personnel, vehicles, supplies, and equipment.

(7) Preparation of supplies and equipment, which includes packing, crating, unitizing loads, marking supplies and equipment, and preparing vehicles for loading (including provision of special slings if required). The preparation of supplies and equipment for embarkation is an LF responsibility. It is especially important that landing serial numbers be affixed in some fashion (e.g., placard) to vehicles and items of equipment.

(8) Landing force operational reserve material, which is a package of contingency supplies pre-positioned and maintained onboard select amphibious warfare ships to enhance reaction time and provide support for the embarked landing force in contingencies.

(9) Containerization of AFOE materiel on MSC ships. Loading of AFOE containers will be driven by the anticipated needs of the landing force ashore with respect to the available stowage areas of assigned ships and estimated arrival dates in the AO and the ability of the ship to off-load them. In some cases, auxiliary crane ships may need to be requested for off-load.

d. **Loading of MSC Ships.** The same compatibility regulations that apply to loading amphibious warfare ships apply to ships in the AFOE or follow-up. When required in the interest of national defense, a waiver of navigation and vessel inspection laws and regulations should be obtained from the US Coast Guard to permit MSC-provided ships to carry out their assigned missions in support of military operations or exercises. The AFOE requires prioritized combat loading, rather than administrative loading, because access to its equipment supports the concept of operations ashore. Because the ship's company on MSC ships is not responsible for, or capable of, loading the ship, the LF must take the following actions:

(1) Establish early liaison with the ship's master to obtain a current ship's loading characteristics pamphlet or other provided loading information, correct any ship's loading characteristics pamphlets held by the command, and visually inspect the cargo holds and billeting facilities.

(2) Determine, on an individual ship basis, what services can be provided by the ship because of the limited or, in most cases, complete lack of berthing, messing, and head facilities on MSC cargo ships to support personnel beyond the ship's assigned crew. Make arrangements for all services that cannot be performed by the ship to be handled by other means, such as pierside facilities or frequent rotation of working parties.

(3) Establish, through close liaison with the ship, the size and composition of the ship's platoon (drivers, guards, and maintenance personnel) that will be embarked during the voyage. At this time, determine if cots, sleeping bags, combat rations, water, containers, and portable sanitation accommodations will be required.

(4) Employ available Navy cargo-handling battalion, USA seaport operations company, commercial stevedores, or qualified personnel for operating heavy cargo-handling equipment during the loading of the ship.

6. Embarkation Plan, Organization for Embarkation and Assignment to Ships, and Loading Plan

a. **Embarkation Plan.** The embarkation plan, which may serve as or inform the embarkation annex to the OPORD, is prepared by the embarkation group, unit, or element.

(1) The plan includes the organization for embarkation (major organization of each embarkation echelon directly subordinate to issuing headquarters, annex for detailed list of units comprising each echelon, plan for AFOE and follow-up ships as required), material to be embarked (organic equipment, types and amounts of supplies, preparation instructions, allocation of supplies and equipment, and movement), personnel (uniform, equipment, and baggage; advance party details, such as force protection; movement of

main body; and embarkation rosters), and embarkation areas (assignment of areas and embarkation points, preparation, and MHE). The plan also includes tabs for the allocation of supplies and equipment, assignment of embarkation areas, berthing and loading schedule, and the OE&AS.

(2) The OE&AS worksheet is normally published at the LF and/or embarkation group level, but it may also be published at the embarkation unit and/or element levels as appropriate. The OE&AS worksheet includes LFs, naval, and other forces that are embarking on ships (AE and AFOE), self-deploying aircraft, and Air Mobility Command (AMC) airlift. The OE&AS worksheet is normally prepared in two mediums:

(a) The first is in the form of a worksheet (spreadsheet). This facilitates allocation of units and supplies to assigned ships. Figure V-4 provides an example of an OE&AS worksheet (spreadsheet) used by the LF level when there is more than one embarkation group (e.g., AE, AFOE, self deploying aircraft, AMC airlift). An embarkation group and unit could also apply the format of the figure when there is more than one embarkation unit or element (e.g., AE and/or AFOE embarking from multiple seaports, AMC airlift embarking from multiple aerial ports). Further, Figure V-5 provides an example of a second type of OE&AS worksheet (spreadsheet) used by the LF and/or embarkation group, unit, or element when there is only one embarkation group, unit, or element. It provides allocation directly to the embarkation team level. Except for the different embarkation organization (group, unit, element, or team) listed at the top of the worksheet, the format for the OE&AS is basically the same.

(b) The second medium is normally depicted in a naval message that promulgates this information in the embarkation plan. The detailed message format for the OE&AS is published by fleet-type commands (naval surface force and Marine Corps forces).

b. **Loading Plan.** Each individual ship will have a loading plan. The detailed ship loading plan is prepared by the embarkation team for its designated ship. This load plan is reviewed and signed by the commander of troops and submitted to the ship's commanding officer (or master for MSC ships) for approval. The ship's commanding officer (or master for MSC ships) ensures the plan does not exceed the capabilities of the ship and does not adversely affect the stability, trim, or safety of the ship. Embarkation planners normally use the Integrated Computerized Deployment System for ship stow planning.

7. Marshalling, Mounting, Embarkation Area, and Embarkation Points

a. Several terms used in embarkation requiring familiarity are marshalling, mounting, embarkation areas, and embarkation points. Mounting refers to the preparations made in anticipation of an operation, including assembly in the mounting area; preparation and maintenance within the mounting area; movement to loading points; and subsequent embarkation into ships, craft, or aircraft if applicable. Figure V-6 illustrates the relationships between these embarkation area segments.

Organization for Embarkation and Assignment to Ships Worksheet (Data used in worksheet is illustrative only)

ORGANIZATION FOR EMBARKATION AND ASSIGNMENT TO SHIPS WORKSHEET
(Data used in worksheet is illustrative only)

EMBARKATION GROUP EMBARKATION GROUP COMMANDER GROUP EMBARKATION OFFICER	**ALPHA GROUP** LTCOL_____ CAPT_____	**BRAVO GROUP** LTCOL_____ CAPT_____	**CHARLIE GROUP** LTCOL_____ CAPT_____

SHIP CAPACITIES

	ALPHA GROUP			**BRAVO GROUP**			**CHARLIE GROUP**		
SHIP/NUMBER	LHD-5	LPD-17	LSD-44	LHA-5	LPD-18	LSD-41	24 F/A-18C 24 F/A-18D	6 EA-6B 6 KC-130	18 AV-6B
OFFICER	191	66	34	172	66	34			
SSNCO (Male/Female)	64/6	42/0	21/3	57/6	36/6	21/3			
E1-E6 (Male/Female)	1,542/66	696/0	420/30	1,576/96	835/0	420/30			
VEHICLE (SQFT)	29,203	23,163	18,451	35,663	23,163	18,431			
CARGO (CUFT)	149,293	48,889	6,665	202,174	48,889	6,691			
BULK DFM (GAL)	1,854,710	800,602	18,776	1,800,000	800,602	31,910	*REFLECT FLIGHT FERRY (If Applicable)*		
MOGAS (GAL)	500	330	500	500	500	500			
BULK JP-5 (GAL)	604,915	315,000	50,569	417,009	315,000	53,000			
SHIP/NUMBER	LSD-50			LSD-51	LSD-46				
OFFICER	32			32	35				
SSNCO (Male/Female)	21/3			21/3	22/3				
E1-E6 (Male/Female)	420/30			420/30	411/39				
VEHICLE (SQFT)	16,003			16,003	19,067				
CARGO (CUFT)	70,000			70,000	6,651				
BULK DFM (GAL)	30,226			31,828	31,910				
MOGAS (GAL)	500			500	500				
BULK JP-5 (GAL)	53,230			53,230	53,000				

	TOTAL LIFT CAPACITY	**ALPHA GROUP CAPACITY**	**BRAVO GROUP CAPACITY**	**CHARLIE GROUP CAPACITY**
OFFICER	**662**	323	339	
SSNCO (Male/Female)	**305/33**	148/12	157/21	
E1-E6 (Male/Female)	**6,740/321**	3,078/126	3,662/195	
VEHICLE (SQFT)	**199,147**	86,820	112,327	
CARGO (CUFT)	**609,252**	274,847	334,405	
BULK DFM (GAL)	**3,453,335**	2,704,314	2,696,250	
MOGAS (GAL)	**4,330**	1,830	2,500	
BULK JP-5 (GAL)	**1,914,953**	1,023,714	891,239	

UNIT LIFT REQUIREMENTS & GROUP EMBARKATION

ORGANIZATION	**UNIT LIFT REQUIREMENT**	**EMBARKED UNIT LIFT ALPHA GROUP**	**EMBARKED UNIT LIFT BRAVO GROUP**	**EMBARKED UNIT LIFT CHARLIE GROUP**
CMD ELE, 2D MEB				
OFFICER	76	63	13	
SSNCO (Male/Female)	21/1	16/1	5/0	
E1-E6 (Male/Female)	289/15	215/5	74/10	
VEHICLE (SQFT/STons)	2,776/22.7	2,118/17.3	658/5.4	
CARGO (CUFT/STons)	1231/6.2	950/4.8	281/1.4	
VMFA-115				
OFFICER	50			50
SSNCO (Male/Female)	12/2			12/2
E1-E6 (Male/Female)	224/8			224/8
VEHICLE (SQFT/STons)	9,118/72.3			9,118/72.3
CARGO (CUFT/STons)	11,200/83.7			11,200/83.7

~EXCERPTS~ *(Note: Additional units not shown in this figure due to space – must be added to make total unit lift requirement and individual group unit lift embarked totals shown below)*

	TOTAL UNIT LIFT REQUIREMENTS	**TOTAL UNIT LIFT EMBARKED APLHA GROUP**	**TOTAL UNIT LIFT EMBARKED BRAVO GROUP**	**TOTAL UNIT LIFT EMBARKED CHARLIE GROUP**
OFFICER	**775**	303	422	50
SSNCO (Male/Female)	**265/27**	117/12	136/13	12/2
E1-E6 (Male/Female)	**6,814/297**	2,761/120	3,829/169	224/8
VEHICLE (SQFT/STons)	**182,711/5,960.4**	85,899/3,075.6	87,694/2,812.5	9,118/72.3
CARGO (CUFT/STons)	**402,206/2,128.4**	207,810/1,086.7	183,196/958.0	11,200/83.7
		Note: Ensure totals do not exceed ALPHA Group Capacity	*Note: Ensure totals do not exceed BRAVO Group Capacity*	*Note: Ensure totals do not exceed CHARLIE Group Capacity*

LANDING FORCE SUPPLIES

SUPPLY CLASS TYPE	**SUPPLIES REQUIRED**		**SUPPLIES EMBARKED ALPHA GROUP**		**SUPPLIES EMBARKED BRAVO GROUP**		**SUPPLIES EMBARKED CHARLIE GROUP**	
	GALLONS	CUFT/STons	GALLONS	CUFT/STons	GALLONS	CUFT/STons	GALLONS	CUFT/STons
CLASS I								
RATIONS		6,768/106.8		3,511/55.4		3,257/51.4		
CLASS III								
LUBE OIL 30WT		2,256/36.4		1,281/20.7		975/15.7		
LUBE OIL 90WT		336/0.4		168/0.2		168/0.2		
MOGAS	3,000		1,000		2,000			
CLASS IV								
MULTIPACK		8,648/37.6		5,000/21.7		3,648/15.9		
LFORM PKG		5,620/46.0		2,810/23.0		2,810/23.0		
CLASS VIII								
AMAL		19,488/139.2		11,253/80.4		8,235/58.8		
TOTAL SUPPLIES	**3,000**	**43,116/366.4**	1,000	24,023/201.4	2,000	19,093/165.0		

LIFT TOTALS (TOTAL UNIT LIFT + LANDING FORCE SUPPLIES)

	GRAND LIFT REQUIRED TOTAL	**TOTAL EMBARKED ALPHA GROUP**	**TOTAL EMBARKED BRAVO GROUP**	**TOTAL EMBARKED CHARLIE GROUP**
OFFICER	**775**	303	422	50
SSNCO (Male/Female)	**265/27**	117/12	136/13	12/2
E1-E6 (Male/Female)	**6,814/297**	2,761/120	3,829/169	224/8
VEHICLE (SQFT/STons)	**182,711/5,960.4**	85,899/3,075.6	87,694/2,812.5	9,118/72.3
CARGO (CUFT/STons)	**445,322/2,494.8**	231,833/1,288.1	202,289/1,123.0	11,200/83.7
MOGAS (GAL)	**3,000**	1,000	2,000	0
		Note: Ensure totals do not exceed ALPHA Group Capacity	*Note: Ensure totals do not exceed BRAVO Group Capacity*	*Note: Ensure totals do not exceed CHARLIE Group Capacity*

Figure V-4. Organization for Embarkation and Assignment to Ships Worksheet (Data used in worksheet is illustrative only)

Legend

2D	second	LPD	amphibious transport dock
AMAL	authorized medical allowance list	LSD	dock landing ship
CAPT	captain	LTCOL	Lieutenant colonel
CMD	command	MEB	Marine expeditionary brigade
CUFT	cubic feet	MOGAS	motor gasoline
DFM	diesel fuel, marine	PKG	package
ELE	element	SQFT	square foot
GAL	gallon	SSNCO	senior staff noncommissioned officer
JP	jet propulsion	Ston	short ton
LFORM	landing force operational reserve material	VMFA	Marine fighter/attack squadron
LHA	amphibious assault ship (general purpose)	WT	weight
LHD	amphibious assault ship (multipurpose)		

Figure V-4. Organization for Embarkation and Assignment to Ships Worksheet (Data used in worksheet is illustrative only) (Continued)

b. Marshalling areas may be required when bivouac or camp areas are so located that movement to embarkation areas cannot be accomplished without interruption. To facilitate final movement to embarkation areas, the CLF selects sites for embarking units close to the embarkation areas.

8. Embarkation Preparations

a. **Sequence of Events and Deployment of an AF.** The potential of tactical employment requires planning, execution, and integration of the deployment regardless of mode of transportation to achieve a rapid buildup of combat power ashore. Preferably, forces will be organized, trained, marshalled, and deployed from the same geographical location. The AF can be created in the objective area, using forward-deployed contingency forces and/or various strategic mobility enhancements, including maritime pre-positioning. This compositing method is mandated by the need for rapid deployment coupled with the reduced ability to mass amphibious ships and other forces because of normal peacetime dispositions. However, MPS assets are not designed for joint forcible entry operations.

b. **Options for Deployment.** Two deployment types should be considered before committing an AF.

(1) Deliberate deployment from one geographical location.

(2) Composite deployment wherein:

(a) Forces from two or more geographical locations are deliberately deployed.

(b) Forward-deployed forces are integrated into the force.

(c) Strategic mobility enhancements (principally, maritime pre-positioning) are used to develop the force in-theater (vice in garrison) before deployment. This option is obviously more complex but is still governed by the same doctrinal precepts.

c. **ISBs.** In some cases, it may be necessary or desirable to deploy forces through ISBs where the desired task organization for landing is developed from forces deployed administratively in strategic assets. This permits optimum tactical configuration of the

Organization for Embarkation and Assignment to Ships Worksheet: Embarkation Unit: ALPHA (Data used in worksheet is illustrative only)

ORGANIZATION FOR EMBARKATION AND ASSIGNMENT TO SHIPS
WORKSHEET: EMBARKATION UNIT: ALPHA (Data used in worksheet is illustrative only)

EMBARKATION TEAM COMMANDING OFFICER OF TROOPS TEAM EMBARKATION OFFICER	**ALPHA 1** LTCOL_____ CAPT_____	**ALPHA 2** MAJ_____ 1ST LT_____	**ALPHA 3** MAJ_____ 1ST LT_____

SHIP CAPACITIES

SHIP NAME **HULL NUMBER**		USS BOXER LHD-4	USS MESA VERDE LPD-19	USS TORTUGA LSD-46
	TOTAL ALPHA GROUP LIFT CAPACITY			
OFFICER	**273**	172	66	35
SSNCO (Male/Female)	**121/9**	57/6	42/0	22/3
E1-E6 (Male/Female)	**2,680/135**	1,573/96	696/0	411/39
VEHICLES (SQFT)	**77,893**	35,663	23,163	19,067
CARGO (CUFT)	**258,714**	202,174	48,889	7,651
BULK DFM (GAL)	**2,632,512**	1,800,000	800,602	31,910
MOGAS (GAL)	**1,300**	500	330	500
BULK JP-5 (GAL)	**785,009**	417,009	315,000	53,000

UNIT LIFT REQUIREMENTS & SHIP EMBARKATION

ORGANIZATION	**UNIT LIFT REQUIREMENTS**	**EMBARKED UNIT LIFT ALPHA 1**	**EMBARKED UNIT LIFT ALPHA 2**	**EMBARKED UNIT LIFT ALPHA 3**
CMD ELE 26 MEU				
OFFICER	31	31	0	
SSNCO (Male/Female)	7/0	7/0	0/0	
E1-E6 (Male/Female)	214/0	208/0	6/0	
VEHICLE SQFT/STons	3,642/89.8	3,269/79.0	373/10.8	
CARGO CUFT/STons	4,929/75.0	4,365/72.0	564/3.0	
VMM-365				
OFFICER	65	65		
SSNCO (Male/Female)	19/0	19/0		
E1-E6 (Male/Female)	355/0	355/0		
VEHICLE SQFT/STons	0/0.0	0/0.0		
CARGO CUFT/STons	2,614/84.6	2,614/84.6		
BLT 3rd BTN 6th MARINES				
OFFICER	58	35	8	15
SSNCO (Male/Female)	26/0	16/0	3/0	7/0
E1-E6 (Male/Female)	1,063/0	535/0	191/0	337/0
VEHICLE SQFT/ST	21,668/1139.8	7,372/242.0	1,560/57.8	12,736/840.0
CARGO CUFT/STons	6,611/76.8	3,392/43.5	141/0.8	3,078/32.5
CLB-26				
OFFICER	18	6	12	0
SSNCO (Male/Female)	17/0	5/0	11/0	1/0
E1-E6 (Male/Female)	253/0	81/0	137/0	35/0
VEHICLE SQFT/STons	14,336/751.2	1,992/132.9	8,275/374.3	4,069/244.0
CARGO CUFT/STons	4,303/105.1	1,036/13.3	1,200/12.8	2,067/79.0
NAVAL SUPPORT ELEMENT				
OFFICER	12	10	1	1
SSNCO (Male/Female)	13/0	8/0	1/0	4/0
E1-E6 (Male/Female)	87/0	45/0	21/0	21/0
VEHICLE SQFT/STons	2,931/119.2	678/29.0	2,138/87.2	115/3.0
CARGO CUFT/ST	2,100/27.2	1,000/16.2	0/0	1,100/11.0
DET, HSC-6 (SAR)				
OFFICER	8	8		
SSNCO (Male/Female)	1/0	1/0		
E1-E6 (Male/Female)	21/0	21/0		
VEHICLE SQFT/ST	0/0.0	0/0.0		
CARGO CUFT/STons	0/0.0	0/0.0		
	TOTAL UNIT LIFT REQUIREMENTS	**TOTAL UNIT LIFT EMBARKED ALPHA 1**	**TOTAL UNIT LIFT EMBARKED ALPHA 2**	**TOTAL UNIT LIFT EMBARKED ALPHA 3**
OFFICER	**192**	155	21	16
SSNCO (Male/Female)	**83/0**	56/0	15/0	12/0
E1-E6 (Male/Female)	**1,993/0**	1,245/0	355/0	393/0
VEHICLE SQFT/STons	**42,577/2100**	13,311/482.9	12,346/530.1	16,920/1087.0
CARGO CUFT/STons	**20,557/368.7**	12,407/229.6	1,905/16.6	6,245/122.5
		Note: Ensure totals do not exceed ALPHA 1 Ship Capacity	*Note: Ensure totals do not exceed ALPHA 2 Ship Capacity*	*Note: Ensure totals do not exceed ALPHA 3 Ship Capacity*

LANDING FORCE SUPPLIES

SUPPLY CLASS TYPE	**SUPPLIES REQUIRED**		**SUPPLIES EMBARKED ALPHA 1**		**SUPPLIES EMBARKED ALPHA 2**		**SUPPLIES EMBARKED ALPHA 3**	
	GALLONS	CUFT/STons	GALLONS	CUFT/STons	GALLONS	CUFT/STons	GALLONS	CUFT/STons
CLASS I								
RATIONS		13,160/118.0		8,084/94.0		5,076/24.0		
CLASS III								
LUBE OIL		3,902/48.0		2,120/40.0		1,782/8.0		
MOGAS	1200		400		300		500	
CLASS IV								
MULTIPACK		850/3.2		850/3.2				
LFORM PKG		2,808/23.0		1,836/18.0		972/5.0		
CLASS V								
GROUND		43,922/409.0		40,000/395.0		3,922/14.0		
AIR		35,826/452.0		23,000/407.0		12,826/45.0		
CLASS VIII								
AMAL		1,750/9.4				1,250/6.3		500/3.1
TOTAL SUPPLIES	**1,200**	**102,218/1062.6**	400	75,890/957.2	300	25,828/102.3	500	500/3.1

LIFT TOTALS (TOTAL UNIT LIFT + LANDING FORCE SUPPLIES)

	GRAND LIFT REQUIRED TOTAL ALPHA GROUP	**TOTAL LIFT EMBARKED ALPHA 1**	**TOTAL LIFT EMBARKED ALPHA 2**	**TOTAL LIFT EMBARKED ALPHA 3**
OFFICER	**192**	155	21	16
SSNCO (Male/Female)	**83/0**	56/0	15/0	12/0
E1-E6 (Male/Female)	**1,993/0**	1,245/0	355/0	393/0
VEHICLE SQFT/STons	**42,577/2,099.8**	13,311/482,9	12,346/530.1	16,920/1,087.0
CARGO CUFT/STons	**122,775/1,431.3**	88,297/1,186.8	27,733/118.9	6,745/125.6
MOGAS (GAL)	**1,200**	400	300	500
		Note: Ensure totals do not exceed ALPHA 1 Ship Capacity	*Note: Ensure totals do not exceed ALPHA 2 Ship Capacity*	*Note: Ensure totals do not exceed ALPHA 3 Ship Capacity*

Figure V-5. Organization for Embarkation and Assignment to Ships Worksheet: Embarkation Unit: ALPHA (Data used in worksheet is illustrative only)

Legend

1ST LT	first lieutenant	LHD-4	amphibious assault ship (general purpose)
AMAL	authorized medical allowance list	LPD	amphibious transport dock
BLT	battalion landing team	LSD	dock landing ship
BTN	battalion	LTCOL	lieutenant colonel
CAPT	captain	MAJ	major
CLB	combat logistics battalion	MEU	Marine expeditionary unit
CMD	command	MOGAS	motor gasoline
CUFT	cubic feet	PKG	package
DET	detachment	SAR	search and rescue
DFM	diesel fuel, marine	SQFT	square foot
ELE	element	SSNCO	senior staff noncommissioned officer
GAL	gallon	Ston	short ton
HSC	helicopter sea combat (Navy)	USS	United States Ship
JP	jet propulsion	VMM	Marine medium tiltrotor squadron
LFORM	landing force operational reserve material		

Figure V-5. Organization for Embarkation and Assignment to Ships Worksheet: Embarkation Unit: ALPHA (Data used in worksheet is illustrative only) (Continued)

forces to support the landing plan. ISBs play a critical role when facilities in the operational area do not support the basing or terminal requirements of the strategic lift required to move the LF into the operational area. An ISB may serve as the site of the landing rehearsal. Forces deployed to an ISB normally remain under the OPCON of the CATF.

d. **Deployment Using Strategic Mobility Enhancements.** The deployment enhancements listed below improve the responsiveness of limited transportation resources and the impact of amphibious and strategic lift shortfalls.

(1) **Forward-Deployed Forces.** Forces deployed to forward areas can be used singly or in combination with other forces to comprise an assault force that can move rapidly to an objective area. In peacetime, forward-deployed forces possess limited forcible entry capability and sustainability when employed alone. The requirement for some strategic lift, both air and sea, will be reduced for the entire LF because the forward-deployed forces possess organic aircraft and lighterage for ship-to-shore movement. An ISB may be required to enable the forward-deployed unit to be reconfigured to execute the landing plan.

(2) **Pre-Positioning**

(a) **Geographic Pre-Positioning.** The positioning of equipment in strategically important areas of the world provides the ability to deploy forces more rapidly by eliminating the need to strategically transport large amounts of materiel over great distances to the objective area. Theater mobility resources are needed to move the pre-positioned equipment.

(b) **Maritime Pre-Positioning.** The pre-positioning of equipment and supplies on ships provides more flexibility than does geographic pre-positioning. The mobility of ships permits early movement toward a trouble area. The need for airlift and its underlying requirement for airfields, staging areas, and security make deployment of an MPF dependent on supporting strategic mobility resources. MPF operations also require the preparation of the ships and embarked watercraft and equipment before arrival in the operational area and assessment of the port or beach and arrival airfield. To accomplish these requirements,

Schematic Diagram of the Marshalling Area, Mounting Area, Embarkation Area, and Embarkation Points

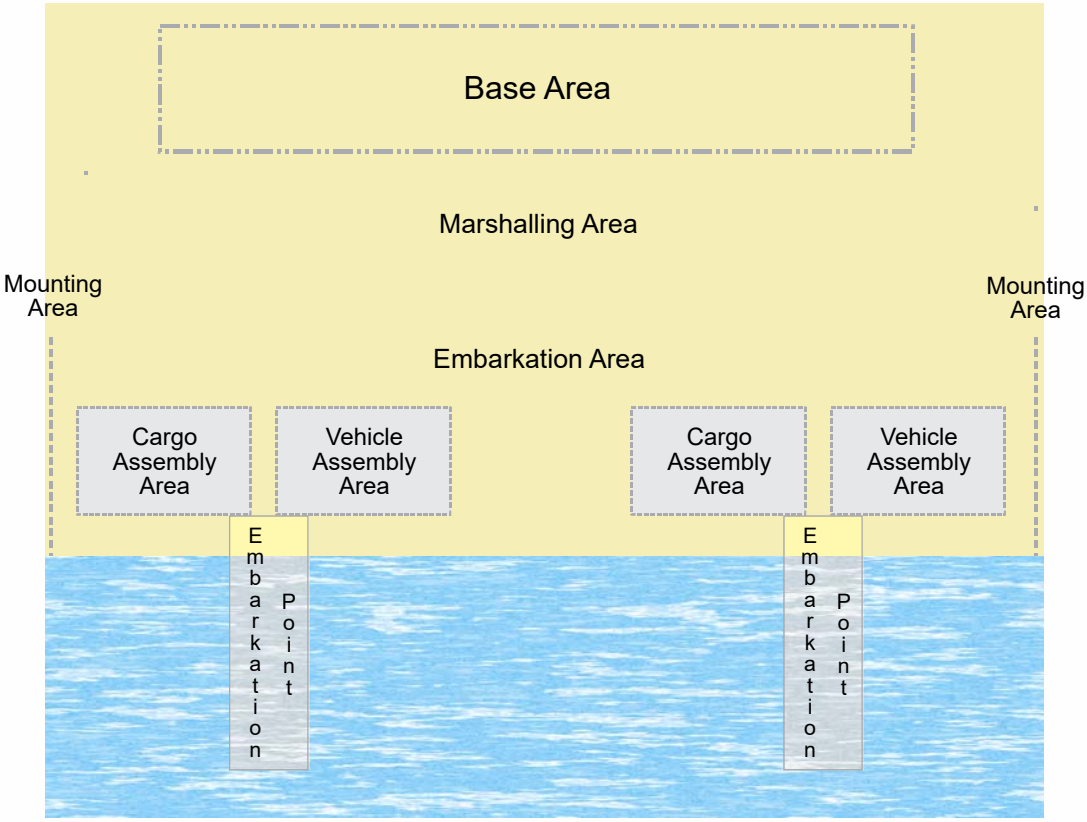


Figure V-6. Schematic Diagram of the Marshalling Area, Mounting Area, Embarkation Area, and Embarkation Points

planners should take into consideration the timing for deployment of the off-load preparation party and the survey-liaison-reconnaissance party. Ideally, the off-load preparation party should embark on the MPSRON at least 96 hours prior to the MPSRON's arrival in the operational area. Positioning of the MPSRON will dictate the timing of these deployments, as will the necessity, if required, for augmentation from the Selected Reserves of the Navy support element, amphibious construction battalion, and cargo-handling battalion. The use of ISBs will be mandatory for reconstituting the pre-positioned units and their fly-in elements, as well as configuring them to fit into the landing plan. Reconfiguration will be accomplished through restructuring units into the task organization necessary to carry out the landing plan.

(c) **Army Pre-positioned Stocks (APS).** The Army maintains the APS program. APS has both land and sea components. It possesses port operations support packages and JLOTS capabilities for use when seaports do not exist, are unavailable, or are insufficient.

For more information on embarkation, see MCTP 13-10M, Amphibious Embarkation.

"...the landing for Utah, geographically separated from the other four beaches, was considered by planners to be almost a separate event and so was given its own formal rehearsal. This was Exercise Tiger. Additionally, there simply were not enough assault training beaches to give it and Force O a simultaneous rehearsal. Finally, as the last Assault Force to be formed up and given the least amount of time to train, Force U might have been seen as the Assault Force requiring the greatest amount of special attention—hence, a separate and additional rehearsal."

Christopher D. Yung, *Gators of Neptune: Naval Amphibious Planning for the Normandy Invasion* (Annapolis, MD: Naval Institute Press, 2006), pp. 158-159

SECTION B. REHEARSAL PHASE

9. Overview

a. Rehearsal is the period during which the prospective operation is practiced to:

(1) Test the adequacy of the C2; all plans, such as ship-to-shore movement, communication, and NSFS; and the timing and sequence of detailed operations.

(2) Test the integration and combat readiness of participating forces.

(3) Familiarize all echelons with the plan.

(4) Test communications and information systems.

b. Each rehearsal should be followed by an after action review and, where necessary, appropriate adjustments to the plan. The CATF and CLF should allow sufficient time to make adjustments and, if necessary and circumstances permit, allow for another rehearsal to assess if the adjustments are effective. Certain, more complex phases of the operation may require several rehearsals to identify friction points. A rehearsal may not be possible or may be limited to a staff rehearsal. Thus, the pace of the embarkation may be slowed or movement to a more secure site may be required shortly after the withdrawing force is embarked to enable selected cross-decking for safe transit to the selected debarkation location. It may be necessary to rearrange the loads on the ships to accommodate lessons learned from the rehearsal.

c. **Types of Rehearsals.** The types of rehearsals are based on the individual needs of the ATF and LF. Rehearsals are not unit-level training; rather, they are conducted to exercise the ATF and LF ability to execute the OPLAN for the specific mission assigned.

(1) **Staff Rehearsals.** Staff rehearsals are conducted by all staffs scheduled to participate in the amphibious operation and may include command post and tabletop exercises. They are conducted prior to integrated AF rehearsals. Wherever possible, rehearsals should take place in the same spaces and using the same circuits that will be used during mission execution.

(2) **Integrated Rehearsals.** Integrated rehearsals are those conducted between the ATF and LF staffs, units, and elements. They can range from participation by a large number of personnel and ATF and LF assets to just a token number of personnel and certain landing craft and air assets. Regardless of the size and scope, the full spectrum of C2 capabilities should be exercised. Rehearsals under EMCON conditions may be desired or required.

(3) **Separate Force Rehearsals.** Separate rehearsals are conducted by elements of the AF such as the amphibious advance force. These forces are those in which their operations demand close integration and coordination with the action phase (e.g., MCM forces).

10. Rehearsal Requirements

The rehearsal phase may be conducted concurrently with other phases of the amphibious operation but most often is associated with the movement phase. During this period the AF, or elements thereof, conduct one or more rehearsal exercise(s), ideally under conditions approximating those expected in the AOA and landing area. The objective during this phase will be to exercise as much of the force and the CONOPS as the situation permits, with OPSEC and time being limiting factors.

11. Rehearsal Plans

a. Responsibility for preparation of rehearsal plans is the same as for preparation of the OPLAN. Rehearsal plans require execution of the various tasks and functions paralleling those required during the operation. They are issued separately from the OPLAN.

b. The number, nature, and scope of rehearsals will be influenced by the following considerations:

(1) The complexity of the tasks.

(2) Time available for rehearsals.

(3) State of training, for example: general amphibious proficiency in debarking, proficiency at night in all light levels, or proficiency in hot or cold temperature environments.

(4) Suitability of available areas.

(5) Special or unusual problems to be faced in the actual operation.

(6) Adequacy of communications system.

(7) Logistic and CSS availability to replenish, replace, or repair assets used.

(8) OPSEC to prevent disclosure of timing, location, or intent to conduct an amphibious operation.

(9) Organic modeling and simulation capability.

(10) The rehearsals may be able to be used as part of a deception plan to deceive the enemy of the intended location of the amphibious operation or even the time of the operations. Rehearsals may be able to lure the enemy into complacency.

c. Factors influencing the dates on which rehearsals are conducted and the time allocated for them include:

(1) Complete and careful execution of the entire rehearsal.

(2) Re-embarkation of all troops, equipment, and supplies.

(3) Replenishment, repair, or replacement of equipment and supplies used during rehearsals, including landing craft, ships, or aircraft.

(4) After action reviews at all levels of command for evaluation and correction of problems.

(5) Time to revise areas of the plan in which the rehearsal identified problems.

d. Selection of the rehearsal area is influenced by the following:

(1) Similarity of the rehearsal area to the actual landing area.

(2) Feasibility of employing live ammunition.

(3) OPSEC.

(4) Susceptibility to enemy interference.

(5) Location of the rehearsal area in relation to the operational area and to points of embarkation.

(6) Health conditions at the rehearsal area.

(7) Activity of civilian personnel, vehicles, shipping, and small craft that may interfere with the rehearsal.

(8) Environmental and management restrictions.

e. Testing the communications and information systems plans will be influenced by the following:

(1) Level of training of communications and information systems personnel and training time available.

(2) Level of training of intelligence, maneuver, fires, logistics, and other functional area personnel regarding their use of communications and information systems resources.

(3) Status of communications and information systems equipment.

(4) OPSEC and information security restrictions.

12. Rehearsal Security

a. In formulating plans for movement to the operational area, sea routes and rendezvous points should be carefully selected. Sea routes through mineable waters, or close to enemy shore installations from which the enemy can carry out air, surface, or subsurface attacks, are to be by-passed if possible. To minimize probability of detection, routes will be planned to avoid known or probable areas of enemy surveillance. Flexibility should be given in allocation of transit time to permit evasive courses to be steered by movement groups if it becomes necessary to avoid surface or subsurface threats.

b. Because of similarity between the rehearsal and the actual operation, strict OPSEC measures must be enforced during rehearsals. The reconnaissance for, selection of, and arrangements for the use of the areas in which rehearsal(s) are to be held must be accomplished carefully. Deception measures may be necessary to provide for security of the rehearsal.

c. Unauthorized observation of the AF or unauthorized communications with external agencies should be prevented. The primary means of limiting unauthorized observation are restricting movements of personnel and ships and establishing security perimeter patrols around the rehearsal area, both at sea and ashore. Special precautions must be taken to maintain communications security (COMSEC). COMSEC is essential and must be maintained throughout planning and execution. While COMSEC's primary purpose is to protect classified materials, it can assist with identifying vulnerabilities to loss of critical information through monitoring communications within legal constraints.

d. Reconnaissance satellites present a real threat to the AF rehearsals. Execution of the rehearsal may have to be timed to coincide with those time periods when forces are not vulnerable to satellite observation. Adjustment to the rehearsal (e.g., selection of misleading terrain, decentralized rehearsals, subordinate rehearsals separated by time and distance, and deliberately executed deception operations) may also be used to mask the purpose, location, and timing of the amphibious operation.

e. Maximum use of wargames and simulation should be considered to prevent detection of rehearsal activities. There are many events that take place in an amphibious operation that lend themselves to simulations. Denying observations of intentions to the enemy, local population, and the media is critical.

SECTION C. MOVEMENT PHASE

13. Overview

The movement phase commences on the departure of ships from loading points in the embarkation areas and concludes when ships arrive at assigned stations in the operational area. During this phase, the AF is organized into movement groups, which execute movement in accordance with the movement plan on prescribed routes (with alternate routes designated for emergency use). In amphibious operations, the movement plan is the naval plan providing for the movement of the ATF to the objective area. It includes information and instructions concerning departure of ships from embarkation points, the passage at sea, and the approach to and arrival in assigned positions in the objective area. The movement phase presents an opportunity for the CATF to exploit the sea as maneuver space. In the event of hostilities, the CATF has the difficult task of hiding a large force at sea, providing for its defense, and then converging at a time and place not wholly unexpected by the enemy. Knowledge of the enemy's surveillance capability will be a key consideration in achieving surprise. Movement of the force to the operational area may be interrupted by rehearsals, stopped at staging areas for logistic reasons, or paused at rendezvous points.

14. Echelons of the Landing Force

a. The echelons of the LF may include the AE, the AFOE, and follow-up. The MPF ships of the APF may also be employed.

(1) The **AE** is that element of a force that comprises tailored units and aircraft assigned to conduct the initial assault in the operational area. The AE is embarked in amphibious warfare ships. The AE ships are combat loaded with troops, equipment, and supplies that typically provide up to 15-30 DOS. Other elements included in the AE are LF elements of the amphibious advance force that deploy with sufficient supplies to accomplish their mission and sustain themselves until subsequent forces arrive.

(2) The **AFOE** is that echelon of the assault troops, vehicles, aircraft, equipment, and supplies, which, although not needed to initiate the assault, are required to support and sustain the assault. The AFOE is normally required in the operational area no later than five days after commencement of the assault landing. The AFOE is divided into air-lifted and sea-lifted forces and supplies. Required arrival time in theater, suitability of material for air and sea lift, and lift availability, in that order, will determine transportation mode.

(3) **Follow-up** is the reinforcements and stores carried on USTRANSCOM surge ships and aircraft, which were not originally part of the AF, that are off-loaded after the AE and AFOE have landed.

b. MPF and other APF operations that augment and reinforce the LF are scheduled to best support the AF in conjunction with the anticipated arrival of the AFOE. The APF can provide equipment and supplies to a MEB or USA maneuver unit at a secure location in the operational area. These additional troops, supplies, and equipment can then be

picked up and transported by ATF assets as they become available or other means to reinforce or augment forces ashore.

c. The passage of designated movement groups may be interrupted by stopping at points where they wait until called forward to the landing area by the CATF. A regulating point is an anchorage, port, or ocean area to which the ships carrying the AE, AFOE, and follow-up proceed on a schedule and at which they are retained by the CATF until needed in the transport area for unloading. Regulating points also serve as a rendezvous point to which ships proceeds when empty to await formation of a convoy or movement group for movement toward bases outside the AOA. In this manner, congestion of ships in transport areas in the landing area can be reduced. This can contribute to passive defense against WMD and weapons that could create effects in the littorals.

For additional information on MPF operations, see NTTP 3-02.3M/MCTP 3-10D, Maritime Prepositioning Force Operations.

15. Modes of Transportation

a. **Determinants of Transportation Modes.** Considerations include the need to combat load the AE, provide transport for combat ready capabilities within the AFOE, the time required to close in the AOA or AO, suitability of materiel for sealift or airlift, availability of suitable sea and air ports of debarkation, and availability of assets are factors affecting the ways and means of deployment.

b. **Sealift.** The ability to mass personnel and materiel, as well as the flexibility to change the time and place of loading, usually dictates a heavy reliance on sealift. The AE is embarked in amphibious warfare ships. Rolling stock and most equipment and supplies of the AFOE arrive by USTRANSCOM provided ships.

c. **Airlift.** Intratheater, intertheater, and self-deploying air assets may be used to move personnel and select low-density, high-demand supplies and equipment.

d. **Mode Integration.** Movement via sealift and airlift must be fully integrated to optimize timeliness and minimize possible port throughput constraints. Port loading considerations and modes of transportation must be fully integrated to ensure the smooth, coordinated flow of personnel and materiel into the AOA or AO.

16. Organization for Movement

a. AF assets are organized into movement groups for embarkation and deployment to support the amphibious operation based on the landing plan. The ATF may be task-organized into movement groups based on ports of embarkation and individual ship speed, mission, and required arrival time in the operational area. All LFs, self-deploying LF aircraft, and self-deploying USAF units should be task organized into separate movement groups. A movement group will include all required screen and logistic support. If more than one landing area is established in the operational area, additional movement groups may be formed.

b. **Pre-D-Day Movement Groups.** The amphibious advance force, when used, usually proceeds to the landing area as a single movement group. However, if there is a wide disparity of speed between various ships, or if part of the LF is required to support other missions before the arrival of the main body of the AF, it may be necessary to organize the amphibious advance force into two or more movement groups, each with its own screening group.

c. The main body of the AF during transit should consist of one or more of the following: amphibious movement groups, one or more transport movement groups, or one or more combat logistic force ships and may include one or more surface action groups for screening. It may be desirable to attach all or part of the combat logistic force ships or surface action group to the amphibious and transport movement groups to provide support and protection from attack while en route. The amphibious and transport movement groups may be combined during movement to the AOA or operational area to reduce the number of assets necessary to protect and sustain the force during transit. Protection from attack while en route may also be provided by nonorganic forces. Elements of the AF may be phased into the operational area by echelons or be brought in simultaneously.

(1) **Amphibious Movement Groups.** These groups contain the amphibious warfare ships and required landing craft that directly deploy and support the landing of the LF. The AE is normally embarked in the amphibious movement groups.

(2) **Transport Movement Groups.** All other military, civilian, and commercial ships carrying supplies, cargos, and forces allocated to an amphibious operation, such as those in the AFOE, are included in this group. MSC manages a mix of government-owned, MSC-operated ships. The crew are government or civil service employees; government-owned, contract-operated ships with merchant marine crews through general agency agreements with companies; and contracted ships. This group could include:

(a) APF vessels from the MPF that support the Marine Corps, APF that support the Army as afloat pre-positioned stocks (three ships), and a collection of vessels that support the USN and the USAF.

(b) MSC's sealift fleet consisting of large, medium-speed RO/RO ships capable of moving large amounts of heavy unit equipment such as tanks, large-wheeled vehicles, and helicopters.

(c) Other MSC-chartered ships, consisting of commercial ships (both US and foreign-flag) acquired for specific lift requirements. US-flagged commercial vessels are volunteered and activated under the Voluntary Intermodal Sealift Agreement (VISA)/Maritime Security Program. The VISA program provides for a time-phased activation of commercial intermodal equipment to coincide with DOD requirements while minimizing disruption to US commercial operations. The VISA program can be activated in three stages as determined by DOD, with each stage representing a higher level of capacity commitment. In Stage III, participants must commit at least 50 percent of their capacity. Dry cargo vessels enrolled in the Maritime Security Program must commit 100 percent during Stage III. The Maritime Security Program maintains a core fleet of US-

flag, privately owned ships operating in international commerce, which are also available under agreement to provide capacity needed to meet DOD requirements during war and national emergencies.

(d) Up to two MSC-operated hospital ships.

(e) The Maritime Administration Ready Reserve Force consisting of former commercial or military vessels of high military utility, including aviation logistic support ships, an offshore petroleum discharge system (OPDS) ship, RO/RO and fast sealift ships, and crane ships. These vessels are maintained in a five or ten-day readiness status by the Maritime Administration and are under OPCON of MSC when activated.

For additional information on USTRANSCOM- and MSC-controlled sealift assets, see JP 4-02.1, Sealift Support to Joint Operations.

(f) Ships provided by allied, partner nation, and friendly governments.

(g) Additional detachments provided by the Army can add capabilities such as the logistic support vessel or LCU-2000 to augment transport group task organizations when conditions will permit Army land component command seaborne and beach landing capability integration.

(h) Expeditionary fast transports to support intratheater movement of personnel, vehicles, and cargo to ISBs or movement to ports.

(3) **Airlift Movement Groups.** Airlifted supplies and equipment that may be brought in as part of the AFOE are included in this group. A fly-in echelon to link up with equipment delivered by the MSC is also included. Aircraft assigned can be organic military or commercial, to include:

(a) Aircraft activated/volunteered under Civil Reserve Air Fleet.

(b) Aircraft requisitioned by the USG.

(c) Aircraft provided by allied, partner nation, and friendly governments.

(4) **Support Movement Groups.** These movement groups may include CSGs, MIW ships, screening ships, fire support ships, and other combatants and ships to support the amphibious operation.

d. **Post-D-Day Movement Groups.** Movement groups of the AF scheduled to arrive in the operational area after D-day will usually be assigned a screen for force protection.

e. **Follow-Up Movement Groups.** These movement groups consist of ships not originally a part of the ATF but which deliver troops and supplies to the objective area after the action phase has begun. The first surge ships may arrive in the operational area before unloading of the AE or AFOE ships is complete. In such cases, OPCON or TACON of these elements may be passed to the CATF. The CATF retains OPCON or TACON of

these elements until such time as the amphibious operation is terminated, the elements are detached from the AF, or another off-load authority has been designated.

17. Integration of Amphibious Forces in the Joint Deployment Process

a. **Overview.** It is essential to integrate the deployment of the AF into the Joint Operation Planning and Execution System (JOPES) to provide a movement timeline picture for higher headquarters and to generate requirements for strategic lift (Commander, United States Transportation Command [CDRUSTRANSCOM], assets) that may be essential parts of the AF deployment. The JOPES publications (CJCSM 3122 series) and the Adaptive Planning and Execution publications (CJCSM 3130 series) provide details on the procedures. Because of the need to orchestrate the deployment of the AF by all modes of transportation to meet the tactical requirements of the amphibious operation, the CATF and the CLF determine movement requirements based on desired arrival times in the AOA or AO.

b. **Establishing and Updating Requirements.** For USTRANSCOM components to provide strategic lift, transportation requirements must be identified and validated by the supported commander.

(1) Based on guidance provided by the supported CCDR, the CATF or the CLF establishes time-phased force and deployment data to identify lift requirements and preferred modes of transport, port of debarkations, and destinations.

(2) Deploying units provide unit movement information that includes available and required load dates at ports of embarkation and unit personnel and equipment characteristics (dimensions, weights, quantities), which, together, comprise load data that are used to determine the number and types of strategic lift assets necessary to deploy the force.

(3) CDRUSTRANSCOM analyzes movement requirements and capabilities and makes recommendations to the supported CCDR.

c. **Scheduling and Tracking Intertheater Sealift and Airlift.** When requirements are identified and validated in JOPES, CDRUSTRANSCOM will provide strategic lift for the deployment in accordance with the JOPES manual. Strategic (intertheater) sealift and airlift are provided by CDRUSTRANSCOM, as directed by the GCC, to meet the time-phased force deployment requirements of the AF. Overall movement control procedures are contained in JP 4-09, *Distribution Operations.* Additional information on embarkation operations is contained in JP 3-35, *Deployment and Redeployment Operations.*

(1) **Sealift.** Since the CATF plans, schedules, and executes ship movements, normal USN movement report procedures are employed. From strategic (intertheater) sealift allocated by the Secretary of Defense at execution, the GCC and CDRUSTRANSCOM will direct required fleet commanders and MSC to sail ships to designated seaport(s) of embarkation. At Military Surface Deployment and Distribution Command (SDDC)-controlled seaport(s) of embarkation, SDDC assumes responsibility for reporting ship loading. The Naval Cooperation and Guidance for Shipping organization

office will file movement reports for ships on completion of loading and before sailing. The Navy component commander enters scheduled ship movements into JOPES in accordance with the JOPES procedures. At SDDC-controlled ports, strategic sealift ships are loaded in coordination with the CATF and CLF and deployed under the control of the Navy component commander. Strategic sealift ships convoy or deploy independently, depending on the threat and ship capability. Control during transit is vested in the CATF, who plans ship arrival in the AOA or AO as called for in the landing plan as reflected in the JOPES time-phased force deployment data.

(2) **Airlift.** AMC develops and enters schedules in the Global Decision Support System and executes the airlift in support of the CATF and CLF. The CLF, as the preponderant user of airlift in the AF, may serve as the coordinating agent for the AF airlift requirements and scheduling. Using the LF movement control agencies, the CLF plans and monitors the airlift, through Global Command and Control System and the Global Decision Support System, to ensure integration with the sea movement. AMC airlift deploys in support of the CATF, under control of CDRUSTRANSCOM, to meet required arrival times. Transport aircraft fall under control of the CATF while in the AOA or AO until a land-based air control agency is established ashore so integration with the landing of sealifted forces is achieved, and the unified air defense and airspace control of the operational area is maintained.

CHAPTER VI
ACTION PHASE

SECTION A. PREPARATION AND SHAPING OF THE OPERATIONAL ENVIRONMENT

1. Overview

a. Prior to the execution of the action phase of an amphibious operation, the JFC seeks to shape the operational environment. Although these operations are usually referred to in the context of an amphibious assault or amphibious raid, they may be used to support other types of amphibious operations such as shaping the operational environment for a NEO or FHA. Shaping operations include supporting and prelanding operations.

b. The JFC and JFMCC will use CSGs, other maritime, and joint forces to prepare the AOA or operational area prior to the commencement of the amphibious operation. The support relationship between a CSG commander, other commanders shaping the operational environment, the CATF, and the CLF should be outlined in an establishing directive. The manner in which these operations are conducted will depend on the type of amphibious operation. The forces required and the time period in which these operations are conducted typically define the operation.

2. Conceal the Force

a. Planners consider how to conceal the AF and their intentions throughout all phases of the operation. Plans include actions to hide the force, confuse the enemy, and reduce the enemy's sensors effectiveness, while embarking and rehearsing and during movement and the action phases. The plans consider the AF as a whole and as the ATF or LF individually.

b. **MILDEC**

(1) The initiating directive will normally specify the scope of employment of deception operations. Additional AF requirements for employment of deception operations will be made known to and coordinated with higher authority during planning.

(2) MILDEC objectives may:

(a) Cause the enemy commander to employ forces and assets in ways that are advantageous to the joint force.

(b) Cause the enemy to reveal strengths, dispositions, and intentions.

(c) Cause the enemy to withhold strategic reserves until friendly forces have achieved mission success.

(d) Condition the threat to particular patterns of friendly behavior to induce threat perceptions that are exploitable at a time chosen by the joint force.

(e) Cause the enemy to waste combat power with inappropriate or delayed actions.

(3) The MILDEC plan, if created, should clearly delineate both the goal and the objective of the deception. This provides the commander with a solid understanding of how the deception supports the overall operation and establishes a firm foundation for planning and executing MILDEC operations.

(4) Feints are similar to demonstrations in that both intend to deceive the enemy, but feints often involve contact with the enemy

(5) MILDEC may include the use of terrain masking, camouflage, darken ship procedures, and EMS operations.

For additional information on MILDEC, see JP 3-13.4, Military Deception.

c. **OPSEC**

(1) OPSEC is a capability that identifies and controls critical information and indicators of friendly force actions attendant to military operations and incorporates countermeasures to reduce the risk of an enemy exploiting vulnerabilities. When effectively employed, it denies or mitigates a threat's ability to compromise or interrupt a mission, operation, or activity. Without a coordinated effort to maintain the essential secrecy of plans and operations, our enemies can forecast, frustrate, or defeat friendly military operations. Good OPSEC helps to blind our enemies, forcing them to make decisions with insufficient information.

For additional information on OPSEC, see JP 3-13.3, Operations Security.

(2) River City is an OPSEC countermeasure. River City conditions provide procedures to control outgoing paths from ships and shore systems (e-mail, web browsing, telephone systems, cell phones, satellite phones) for the purpose of OPSEC and force protection. Prior to commencing sensitive planning or operations that could be compromised by inadvertent communications or information release, implementation of River City requires commands to develop a prioritized information systems users list that identifies users by their need to access systems to perform mission essential duties. The list should not be solely based on rank or pay grade but based on function to support mission accomplishment. Those users who do not require access to systems to support mission planning or accomplishment should be grouped accordingly.

For more information on River City, see NTTP 3-13.3M/MCTP 3-32B, Operations Security (OPSEC).

d. **EMCON** is the selective and controlled use of electromagnetic, acoustic, or other emitters to optimize C2 capabilities while minimizing, for OPSEC purposes, detection by enemy sensors, mutual interference among friendly systems, and enemy interference with the ability to execute a MILDEC plan. EMCON is a vital environment awareness and

shaping tool. It enables the commander to present the desired electronic and acoustic profile to the enemy while achieving friendly situational awareness and C2 objectives.

e. **SIGCON** is the management of observable friendly force indicators to undermine the enemy's ability engage the AF. SIGCON controls exploitable AF activities to deny, degrade, or deceive the full range of enemy intelligence, surveillance, reconnaissance, and targeting capabilities. SIGCON is a risk management tool to identify dynamic and tactical responses versus tradeoffs; when to emit or not emit.

f. **Satellite vulnerability**. Ships' emissions may radiate in all directions, making them detectable by space-based sensors. The satellite vulnerability program is designed to mitigate this vulnerability. Data concerning the capabilities and orbits of these satellites is processed to determine periods of vulnerability.

For additional information on EMCON and satellite vulnerability, see NTTP 3-51.1, Navy Electronic Warfare.

3. Supporting Operations

a. Supporting operations are conducted to establish the requisite conditions for an amphibious operation (e.g., establishment of air and maritime superiority). Supporting operations are directed by the JFC or a designated commander and are to a large degree based on requests for certain actions from the CATF and CLF. The JFC or JFMCC may employ a support force, which is a temporary organization comprised of initial response forces and SOF in the operational area to assist in preparing the operational area for amphibious operations. The JFC or JFMCC will normally determine how to best organize the support forces to shape the operational environment. These operations are normally conducted by naval forces, air forces, and SOF and may occur at any time before or after H-hour.

b. Supporting operations may include:

(1) Initiation of MCM operations. MCM operations emphasize the clearance of mines in the transport areas, FSAs, and sea approaches to the landing beaches. MCM forces do not have the capability to conduct their mission in a clandestine manner, do not operate at a high rate of speed, and have limited capability for self-defense. Therefore, the decision on whether and where to conduct MCM during supporting operations (or to postpone their use until prelanding operations) should be made considering not only the mine threat to the AF but also the operational requirement to conduct MCM. However, MCM forces' limitations also can be used to support operational deception.

(2) Hydrographic reconnaissance of the landing beaches and seaward approaches. In a permissive environment, the Navy's Fleet Survey Team may conduct quick response hydrographic surveys and produce chart products in the field to support maritime requirements. They provide high-resolution hydrographic surveys for use in nautical or tactical charting to support amphibious landings, MIW, or naval special warfare with bathymetry and other collected hydrographic information. Deployable detachments from this team can conduct navigation quality surveys or clearance surveys to provide access to ports and waterways in support of amphibious operations. In forward-deployed

ARGs and MEUs operations in which access to the above teams may be more difficult, the CATF and CLF should use organic or supporting reconnaissance and surveillance assets to provide hydrographic information. Beach surveys and hydrographic reconnaissance can be conducted by SOF/SEAL teams that operate as a task unit within the AF or independently under the OPCON of the theater special operations command commander. SOF/SEAL teams can be employed prior to an opposed assault and may be part of an operation to clear obstacles. When the teams are organic to the AF, these operations may be part of the advance force operations.

(3) METOC support may be obtained directly from the Naval Meteorology and Oceanography Command or via a joint or Service METOC forecast activity in support of naval forces.

See JP 3-59, Meteorological and Oceanographic Operations, *for more information on METOC products.*

(4) Geospatial intelligence products to include tailored imagery, imagery intelligence, maps, charts, and oceanographic data can be obtained from the National Geospatial-Intelligence Agency.

See JP 2-03, Geospatial Intelligence in Joint Operations, *for more information on geospatial products.*

(5) Sea-based and land-based supporting air operations may establish maritime and air superiority, conduct reconnaissance, and shape the operational area by attacking maritime and land targets that may affect the amphibious operation.

(6) Assault breaching efforts and clearing of beach and anti-landing obstacles using underwater demolition or aerial-delivered weapons to destroy obstacles such as mines and barriers within the SZ and on the beach.

(7) Supporting SOF operations include, but are not limited to, MISO, civil-military operations, FHA, special reconnaissance, direct action, and preparation of the environment. SOF will usually remain under the OPCON of the theater special operations command commander and be assigned to support depending on the location and nature of the mission. SOF may also be operating in or near the AOA on distinctly separate low-visibility or clandestine missions in support of the CCDR. Coordination must occur between AF planners and SOF planners to maximize effectiveness. It is important to maintain the SOF chain of command to preserve the C2 relationship(s) of SOF for the gaining commander.

4. Amphibious Advance Force Operations

a. The amphibious advance force, in concert with supporting operations, prepares the AOA or AO. An amphibious advance force is a temporary organization within the AF, which precedes the main body to the AOA or AO. The amphibious advance force may consist of JFC- or JFMCC-provided forces, such as forward-deployed ARGs and MEUs, MCM assets, and other forces, task-organized by the CATF and CLF as a temporary organization within

the AF to help set conditions prior to the arrival of the AF into the operational area. The amphibious advance force facilitates better coordination with the overall landing plan and LF CONOPS ashore. The LF CONOPS, however, should not assume the amphibious advance force will be available for tasking. The start of amphibious advance force operations in no way implies a cessation or reduction in any ongoing supporting operations. The mission of the amphibious advance force may be reconnaissance and intelligence collection or it may be to help achieve local maritime superiority without giving away the location of the AF. The amphibious advance force, for example, may be responsible for the LF conducting reconnaissance, inserting the advance LF, supporting those units with supplies and fire support, and if required, extracting those forces.

b. The command relationships between commanders within the amphibious advance force should be specified in the initiating directive. This includes the potential designation of an amphibious advance force commander that could be chosen by either the CATF or CLF per the initiating directive.

c. The CATF designates the amphibious task group commander for the advance force, provides forces, and ensures the requisite command and information systems are available to conduct the operation.

d. The CLF designates the amphibious advance force LF commander and provides that commander the requisite staff and forces to accomplish assigned tasks. A landing group commander is the officer designated by the CLF as the single tactical commander of a subordinate task organization capable of conducting landing operations against a position or group of positions. A reconnaissance group commander is used when LF units conduct only reconnaissance and surveillance missions.

e. Upon arrival of the AF, the amphibious advance force is disestablished. Certain tasks may dictate that MCM, reconnaissance teams, and SOF, for example, remain TACON to the AF as part of the prelanding operations to minimize disruptions prior to the landing.

f. The decision to employ a support force is made after weighing the advantages of operational and tactical surprise and the requirements for preparation of the landing area. The use of support forces is an integral part of planning the overall amphibious operation. However, the JFC or other higher authority may restrict or preclude the use of a support force based on the diplomatic or military situation. Knowledge of the operational area, the indigenous population, extent of enemy fixed defenses, air defenses, mines, and obstacles should be evaluated.

(1) Complete surprise is difficult to achieve against an alert enemy and the prospects of achieving it decrease with efforts to isolate the AOA/AO. Every effort should be made to conceal the landing areas and AF objectives from the enemy until the commencement of the ship-to-shore movement.

(2) When the landing area is well defended or the offshore areas are densely mined, the destruction or neutralization of the fixed defenses far outweighs the disadvantage of disclosing the selected landing area. Conversely, support operations may be less prudent

when the landing area selected is lightly defended and the main defending force is held in reserve—waiting to employ against the AE.

(3) The command relationships between commanders within the support forces must be specified in the initiating or establishing directive.

5. Prelanding Operations

a. Prelanding operations take place between the commencement of the action phase (arrival of the AF into the operational area) and the ship-to-shore movement. Although they encompass a continuation of similar actions conducted by the support force, they are specifically focused on the landing beaches, sites, and LZs and readiness of the AF to execute. There is no apparent transition between supporting and prelanding operations. Final preparations of the landing area are usually under the control of the CATF and CLF and are more overt in nature. Assets used to conduct these operations may reduce the resources available for tasking at H-hour and L-hour. The CLF ensures inherent risks associated with prelanding operations do not critically impair the LF CONOPS ashore. Some of the planning considerations for prelanding operations include:

(1) Demolition of visible obstacles, clearance of required mines, breaching of any remaining seaward minefields and barriers to and on the beach, overt marking of usable channels, direct action missions, target acquisition (TA) and spotting for NSFS, and initial terminal guidance for designated assault landings.

(2) Air operations in accordance with air support plans, including EW, and preplanned air strikes against enemy installations en route to and in the vicinity of beaches, DZs, LZs, targets of opportunity, and mines and obstacles in the SZ and on the beach.

(3) NSFS in accordance with the NSFS plan, including destruction or neutralization of enemy installations that might interfere with the approach and final deployment of the AF or otherwise interfere with the operation.

(4) Artillery support on landing areas in accordance with artillery fire support plans if artillery has been put in place during prelanding operations.

(5) Ammunition (e.g., naval, aviation ordnance, artillery) expenditure and fuel consumption prior to the landing.

(6) Loss of equipment prior to D-day.

(7) Loss of personnel due to casualties, injuries, sickness, or required recovery periods for long-range reconnaissance teams and aircrews.

(8) Resupply and rearming schedule for the AF or lack thereof.

(9) LF requirement to support other forces prior to and after D-day.

b. The reduced timeframe associated with prelanding operations is not conducive for MCM with respect to the speed at which MCM forces conduct their mission. As such, there are many factors that should be considered and risks weighed to inform a decision for the use of MCM forces, either in the support force operations or in prelanding operations (or some combination of both).

c. With the completion of prelanding operations, the AF will conduct operations into the landing area to accomplish the decisive action.

6. Organization and Command Relationships During the Action Phase

a. In an amphibious operation, the action phase is the period of time between the arrival of the AF in the operational area and the accomplishment of their mission. Organization of forces, responsibilities for accomplishment of tasks, and command relationships during the action phase of all types of amphibious operations are essentially the same. Variations in responsibility and authority as required by the individual situation will be specified in the initiating directive.

b. Organization for the action phase of an amphibious operation is based on the parallel organization of the ATF, LF, and other designated forces. LF organization for landing is the specific tactical grouping of forces for accomplishment of the assigned mission. Tactical integrity of landing elements is maintained insofar as practicable during ship-to-shore movement. The ATF and LF organizations should parallel one another to facilitate execution of the landing plan and the LF scheme of maneuver ashore.

c. The organization of ATF forces for the action phase is as follows:

Amphibious ready group steams in formation.

(1) ATF forces afloat provide the transport groups for the vertical and surface ship-to-shore movement and also provide the necessary landing craft and AAV control organization.

(2) For the surface movement, the LF may be landed from ships by landing craft, AAVs, or small boats (e.g., combat rubber raiding craft).

(3) The amphibious warfare ships, landing craft, AAVs, and organic aviation are organized to correspond to the tactical organization of troops to facilitate control and maneuverability. This organization includes boat waves, boat groups, and boat flotillas.

(a) A boat wave consists of the landing craft or AAVs within a boat group that carries the troops, equipment, or cargo requiring simultaneous landing.

(b) The boat group is the basic organization of landing craft. One boat group is organized for each surface LF element within scheduled waves at a designated beach.

(c) The boat flotilla is an organization of two or more boat groups.

(4) Limited operations using one or more LCAC groups may be conducted from distances that may approach the maximum capability of the craft; however, detailed planning may be required.

(5) For movement by helicopter or tiltrotor aircraft, BLTs or RLTs are formed into helicopter flights, waves, and teams.

d. The LF is organized to execute the landing and to conduct initial operations ashore in accordance with the commander's CONOPS. The major subordinate elements of the LF should be capable of independent operations during the initial stages of the landing and operations ashore. For example, a regimental commander will need time to establish C2 over the separate battalions, which may have landed across different beaches and LZs. Depending on the type of amphibious operation, the organization for landing should also provide for:

(1) Maximum combat power at the point of landing.

(2) Depth to the assault to ensure flexibility and a sustained buildup of combat power.

(3) Dispersion of the force as consistent with other requirements.

(4) Sufficient flexibility to exploit weaknesses found in the enemy defenses.

(5) Timely establishment and employment of tactical and administrative support systems ashore.

(6) Closest possible resemblance to the organization for combat.

e. The Marine Corps will organize as a MAGTF to conduct LF assault operations but will further organize into landing teams (i.e., BLT for a MEU) to facilitate the ship-to-shore movement and initial operations ashore. As with the MAGTF, the Army LF will also organize into landing teams that are based around ground maneuver units within the LF.

(1) The BLT or RLT is a specific tactical organization for landing and should be differentiated from the infantry battalion or infantry regiment respectively or similar organization. It consists of an infantry battalion for the BLT or an infantry regiment for the RLT that is reinforced by such supporting and Service units as may be attached for the movement. For ship-to-shore movement, the landing team is further organized for surface and air movement. Insofar as practicable, the tactical integrity of troop units should be maintained within boat waves and boat teams. A boat team consists of the LF personnel assigned to an individual landing craft.

(2) Task grouping of tanks, artillery, antitank, engineer, and other combat-supporting arms or Service units may be formed to support initial operations ashore but not integrated into a BLT.

(3) Reserve forces are organized in a manner similar to their assault counterparts. Although not tailored for a specific beach or LZ, reserve forces are normally prepared to conduct an assault landing by either landing craft or helicopter movement.

f. The CATF controls both surface and air ship-to-shore movement. Initially, ship-to-shore movement, both on the surface and through the air, is centrally controlled to permit coordination of support for LF elements. Later, as circumstances permit, control of surface movement is decentralized for efficient and rapid execution. However, aircraft movement remains under centralized control.

g. The LFSP is a temporary, special category task organization of the AF that contains a shore party support element, a helicopter support team, and a Navy beach group support element. The primary mission of the LFSP is to facilitate the landing and movement of troops, equipment, and supplies across beaches and into LZs, ports, and airfields.

h. The TACLOG group is a temporary agency, composed of LF personnel, that advises the Navy control organization of LF requirements during ship-to-shore movement. TACLOG groups assist the Navy control organization in expediting the landing of personnel, equipment, and supplies in accordance with the LF landing plan. TACLOG groups also serve as the primary source of information to the CLF regarding the status of LF units during ship-to-shore movement. The TACLOG group provides the link between the LFSP and advises the LF operations center and the Navy control organizations on the status of the off-load. To monitor the landing of aviation elements early in the ship-to-shore movement, the LF aviation commander provides representatives to the senior TACLOG group. As changes or delays in the landing of aviation elements occur, the commander is to be apprised of the situation. Schedules and tables required by aviation representatives in the Navy TACC, in addition to those in the LF aviation landing plan, may be in the air annex to the OPLAN or OPORD.

7. Final Preparations for Landing

In some case, units may need to cross-deck prior to the ship-to-shore movement. Upon completion of any pre-execution operations the ATF starts the final approach to assigned positions for the landings. Ships prepare for the debarkation of the embarked troops, equipment, and supplies in accordance with prepared plans. The commencement of debarkation and the timing of the ship-to-shore movement depend on the designated H-hour. All elements should be prepared to modify plans on short notice to conform to changes in H-hour.

SECTION B. PLANNING AND EXECUTION

8. Conduct of Ship-to-Shore Movement

a. **Conduct of Ship-to-Shore Movement.** All ship-to-shore movement is controlled by the CATF. Ship-to-shore movement is conducted by surface and air assets. For large operations, the CCO, assisted by a PCO for each colored beach, directs all surface ship-to-shore movement. A parallel organization exists for air ship-to-shore movement into an LZ and is controlled by the Navy TACC watch officer and the AATCC.

(1) The commencement of landing craft and aircraft loading operations, and the timing of other ship-to-shore movement preparations, are dependent on the designated H-hour and L-hour. Whether using landing craft, amphibious vehicles, or helicopters and tiltrotor aircraft, the CATF—in conjunction with the CLF—develops and adheres to a strict time schedule based on H-hour. All elements should be prepared to modify plans to conform to changes in H-hour or L-hour. Prior to H-hour or L-hour, surface movement control group personnel are cross-decked, as required, to ships of the control group. Helicopter movement control groups take assigned stations and initiate actions to meet the time schedule for initial landings.

(2) The loading of personnel, equipment, and supplies of the scheduled waves is tedious work and time-consuming. Preparations are made for debarkation of on-call and nonscheduled units and for dispatching these units when required.

(3) The CLF continually reviews progress of the landing and makes requests to the CATF through TACLOG for changes to the landing sequence or employment if on-call waves are necessary. The CATF, through the movement control center, will coordinate with the CCO (or PCO) and the Navy TACC watch officer to respond to the CLF's requests.

(4) The LFSP commander, through the TACLOG, may request the appropriate control officer to suspend the landing of units on the beach if conditions dictate (e.g., enemy action, congestion, weather).

b. **Movement Categories.** LF troops and supplies are arranged in movement categories for ship-to-shore movement, and the categories are as follows:

(1) **Scheduled Waves.** Scheduled waves are launched at predetermined times and places of landing in the initial stages of the assault. They include both waterborne and airborne waves. Time of landing must be carefully coordinated within and between waves and with supporting fires because of the concentration of forces in a limited space. Scheduled landing by surface begins at H-hour and by air at L-hour and continues until all scheduled waves are landed. Landing proceeds per the landing plan without change, except in emergency. The first scheduled, surface-borne wave is dispatched by the CCO, with other waves being launched by the various PCOs in coordination with the CCO. The air ship-to-shore movement is normally completed during the initial unloading period. Helicopters and tiltrotor aircraft usually make several trips to land and supply the LF units going ashore. The prescribed launch times for the airborne waves will be based on many factors such as distance to the LZ, speed of the aircraft, and prevailing weather (wind) conditions.

(2) **On-call Waves.** On-call waves are LF units, equipment, and supplies for which an urgent need ashore is anticipated but whose time and place of landing by surface or air cannot be accurately predicted. The activation of this category normally depends on a tactical development such as the need for reserve units for reinforcement, replacement, or exploitation. Because of the urgency for landing this category, it takes precedence over any other when activated. An on-call wave is placed in an alert status. The number of personnel and equipment placed in an on-call status is minimized consistent with the LF requirements. The landing of on-call waves is initiated when called for by the LF and continues until the required personnel, supplies, and equipment are ashore. Commanders ashore provide the desired place and time for the landing of an on-call wave, through the TACLOG group collocated with the Navy movement control organization. The Navy control officer then directs the landing of the on-call surface waves. The landing of on-call airborne waves may preempt the landing of elements or items in other landing categories. The number of airborne on-call waves or items should be kept to a minimum if their high-priority status is to be preserved

(3) **Nonscheduled Units and Remaining LF Supplies**

(a) Nonscheduled units and remaining LF supplies are landed in accordancewith the requirements of the LF. On rare occasions, these categories may be landed before completion of on-call waves and pre-positioned emergency supplies. This category usually includes certain combat support units and most of the CSS units with higher echelon (division and above) reserve units of the LF. Their landing is directed when the need ashore can be predicted with a reasonable degree of accuracy. Nonscheduled units and previously designated supplies are normally requested by serial until the commencement of general unloading.

(b) The responsibility for their landing is assigned to the commanders of the cognizant control organizations by the CATF. In the landing of nonscheduled units, the maximum coordination between ATF and LF control organizations is essential to enable responsiveness and efficient use of amphibious warfare ships and craft. The CCO and Navy TACC watch officer concerned regulate the movement of the ships and craft in accordance with instructions from appropriate commanders and requests from the

TACLOG group. Any changes in the landing sequence, no matter how slight they may seem, will invariably disrupt the flow of the off-load and may result in unintended delays.

(c) The CLF requests the landing of the nonscheduled units and notifies the CATF of any requested modifications to the landing sequence as early as possible. The landing of nonscheduled airborne units commences on completion of scheduled landings into the LZs. Once started, this process may be interrupted to permit the landing of on-call or other selected units or supplies based on the request of the appropriate LF commander. Furthermore, unforeseen circumstances, such as the requirement for LF helicopters or tiltrotor aircraft to support other tactical missions, may interrupt the landing of nonscheduled units. Once the airborne ship-to-shore movement is completed, transport helicopters and tiltrotor aircraft are employed to meet tactical and logistical requirements of LF operations ashore as directed by the CLF.

(4) **Pre-Positioned Emergency Supplies.** Pre-positioned emergency supplies are designated by the CLF to meet expected critical needs for CSS replenishment early in the ship-to-shore movement. These serialized supplies, available for immediate delivery ashore, are organized into prestaged airlifted supplies and, if employed in larger operations, may be in floating dumps. Floating dumps may be preloaded in landing craft, amphibious vehicles, or other boats and are managed by the appropriate control officer, who directs delivery as requested by the supported unit. Depending on the operation, use of these assets, especially landing craft, may be exclusively required for building up combat power ashore; hence, floating dumps may not be employed. Conversely, for raids and SOF (depending on OPSEC considerations for surprise), AF support to crisis response, and other operations, or riverine operations, floating dumps may be the best, perhaps only, option available to provide the required support.

(5) **Remaining LF Supplies.** These consist of replenishment supplies and equipment not included in basic loads and in pre-staged airlifted supplies or floating dumps and are serialized. In larger amphibious operations, these supplies are listed in embarkation documents and constitute the major portion of CSS transported into the landing area with the AE or AFOE. Certain supplies may be selectively off-loaded to maintain adequate replenishment levels ashore; however, the bulk of the remaining LF supplies are landed during general unloading. These supplies are generally moved ashore via surface means, not via air.

c. **Unloading Operations**

(1) The initial landing and unloading period is a tactical evolution and should provide rapid buildup of combat forces ashore and quick response to LF requirements.

(2) Selective unloading is tactical in nature and used to satisfy immediate support requirements when a full general unloading period is unnecessary or not feasible.

(3) General unloading is primarily logistic-oriented and emphasizes speed, volume, and rapid completion of the unloading of required personnel and materiel. It encompasses the unloading of units and cargo from the ships as rapidly as cargo handling

facilities on the beach or ashore permit. It proceeds without regard to class, type, or priority of cargo.

9. Naval Fire Support During Landing

a. **Final Preparation of the Landing Area.** NSFS is used to destroy or neutralize enemy defense installations that might interfere with the approach and final deployment of the AF and to assist in isolation of the landing area. NSFS is used to support underwater demolition and MCM operations. Immediately before H-hour, major emphasis is placed on the destruction and neutralization of enemy defenses most dangerous to the successful landing of LF teams.

b. **Fires in Close Support of the Initial Assault.** During the initial assault, NSFS is continued on those enemy installations that could prevent the landing until the safety of the leading waves requires these fires to be lifted. The final approach of the leading waves of landing craft, amphibious vehicles, or helicopters and tiltrotor aircraft necessitates a shift of the scheduled fires inland from the landing beaches or outward from the LZs. The major portion of the fires delivered in close support of the landings consists of prearranged fires delivered on a closely fixed schedule in the assault landing team's zone of action. Because the actual rate of advance and the estimated rate of advance may not coincide, the CATF, through the SACC, retards or accelerates the movement of scheduled fires as requested by the CLF. Close supporting fires continue until the shore fire control party with the assault landing teams are in a position to conduct the fires of the assigned direct support ships. At this time, the shore fire control party begins controlling fires.

c. **Deep Support Fires.** Deep support fires are usually delivered by ships assigned in general support. Each general support ship is assigned a zone of responsibility that it covers by fire and observation. Within assigned zones of responsibility and on a prearranged schedule, ships neutralize known enemy targets, interdict enemy LOCs, attack targets of opportunity, execute counterbattery fire, reinforce fires of direct support ships as directed, and conduct missions assigned by the supported unit.

10. Landing Force Operations Ashore

a. LF operations ashore begin with the landing of the first scheduled wave by surface means, vertical insertion, or airborne landing. Elements of the LF quickly transition from an organization for landing to an organization for combat to accomplish the LF missions ashore. Once fully established ashore, the LF conducts tactical operations similar to normal land operations but remains dependent on at-sea forces for support. As the operation progresses and support is established ashore, the degree of dependence is reduced.

b. The CLF plans and executes LF operations ashore. During the initial preparation of the plan, the LF staff develops the essential items necessary to frame the overall OPLAN. The LF CONOPS ashore supporting fires plan, employment of LF aviation, CSS concept, and the engineer breaching plan are produced based on the CLF's guidance and intent.

(1) The LF CONOPS ashore amplifies CLF's decisions and indicates how the operation should progress. The development of the concept of LF operations ashore is an

evolutionary process. The concept developed during detailed planning is a refinement of the initial concept developed during preliminary amphibious planning. Ultimately, the detailed concept is included in the OPLAN. The operational and logistic requirements of subordinate elements and changes in the enemy situation may necessitate modifications to this concept, but it should always provide additional clarity to the LF commander's intent. Included in the LF CONOPS ashore, the scheme of maneuver is a plan for the execution of a tactical COA. It includes objectives, types of offensive maneuver to be employed, distribution of forces, and necessary control measures. In formulating the scheme of maneuver for an amphibious operation, the principles of ground combat remain valid. However, variations of application may be necessary because of the character of the operation.

(2) The fire support plan has a major effect on the development of the LF plan for operations. Until the LF's organic artillery is ashore, NSFS and aviation assets (fixed-wing and rotary-wing) are normally the only means of fire support for the LF. A portion of these assets may also be tasked to defend the AF as a whole, limiting their availability to the LF. Fires that create nonlethal effects are also included in the plan.

For additional information on supporting arms, see Chapter VII, "Fire Support."

(3) The plan for the employment of LF aviation to support operations ashore is integrated with the overall air plans of the CATF and CLF. Air operations performed by ATF and LF aviation elements and other supporting air forces complement one another and constitute a collective capability for support of the amphibious operation. When the LF is a MAGTF, the MAGTF commander retains OPCON of the organic aviation assets for use in support of the LF CONOPS and the overall mission. During the course of the operation, excess MAGTF sorties can be allocated by the JFC to other component commanders as appropriate. The MAGTF commander provides excess sorties and sorties for air defense, long-range interdiction, and long-range reconnaissance to the JFC in accordance with JP 1, *Doctrine for the Armed Forces of the United States*.

(4) The plan for the employment of the LF CSS is expressed in the concept for CSS. This document establishes the logistic support plan for the LF from the embarkation phase through the termination of LF operations ashore.

(5) The plan for clearance and breaching will include a determination of the line of demarcation on the beach that indicates the areas of clearance responsibilities for the CATF and the CLF. The line of demarcation will be determined by the CATF and CLF during the planning phase. Seaward of the beach, in the SZ and on the beach up to the line of demarcation, the CATF is responsible for MCM and assault breaching. Landward of the line of demarcation, the CLF is responsible for reduction of minefields, barriers, and obstacles; explosive ordnance disposal; assault gap crossing; and follow-on clearance of the beach.

For additional information on breaching and planning for breaching, see JP 3-15, Barriers, Obstacles, and Mine Warfare for Joint Operations*; ATP 3-90.4/MCTP 3-34A,*

Combined Arms Mobility Operations; *and NTTP 3-15.24/MCRP 13-10J.1,* Mine Countermeasures in Support of Amphibious Operations.

c. The CLF will usually plan to withhold a portion of the force in reserve during the initial stages of the action phase. The LF reserve must be capable of landing when and where required to best influence the tactical situation as it develops ashore.

(1) Subordinate units of the LF will normally not have their own reserve due to the limited ship-to-shore movement assets and the need to commit all landing groups to maximize the combat power ashore. On-call waves are the normal means by which the ground commander can influence the action ashore. While afloat, certain units may be treated as a reserve for commitment as required by the situation.

(2) When keeping the reserve afloat is no longer advantageous, it is landed and positioned ashore to facilitate future employment. This action should not be undertaken until sufficient area has been seized ashore to permit adequate maneuver space.

11. Subsidiary Landings

a. In an amphibious operation, a subsidiary landing is normally conducted by elements of the AF to support the main landing, usually made outside the designated landing area. An amphibious operation may require one or more subsidiary landings conducted before, during, or after the main landing. If made before, the effect on the main landing should be considered in terms of possible loss of surprise.

b. Subsidiary landings should be planned and executed by commanders with the same precision as the main landing. Division of forces to conduct subsidiary landings is justified only when such employment will be of greater value than commitment to the main landing. Forces employed in subsidiary landings that precede the main landing may be re-embarked and employed as a tactical reserve supporting the main landing. Subsidiary landings may be executed to accomplish one or more of the following specific purposes:

(1) Seize specific areas to be used in support of the main landing (i.e., seizing islands or mainland areas adjacent to the main landing area) for use as:

(a) Artillery, missile, and rocket firing positions.

(b) Airfields or vertical and short takeoff and landing aircraft-capable locations.

(c) Protected anchorage, temporary advanced naval bases, or logistics and CSS sites from which the main landing can be supported.

(d) Air warning and control system sites.

(2) Seize an area to deny its use to the enemy in opposing the main landing.

(3) Divert enemy attention and forces from the main landing or fix enemy defensive forces in place as part of a deception operation.

12. Re-Embarkation and Force Reaggregation

a. Preparatory to reemployment of the force, planning and execution will be conducted to the extent the tactical situation and logistics support ashore allows to support reconstitution and re-embarkation of forces for follow-on mission requirements.

For more information on re-embarkation, see MCTP 13-10M, Amphibious Embarkation.

b. **CONOPS.** In an operation where CBRN contamination has been encountered, mitigating foreseeable risks of residual contamination to the AF is a critical issue. Planning includes characterizing the hazard; quantifying the number of personnel, their weapons, and any vehicles exposed to the contamination; documenting the number and status of any casualties associated with the hazard; and evaluating and documenting the success of decontamination efforts. When operationally feasible, exposed forces must be decontaminated as much as possible prior to commencing recovery. This does not guarantee the absence of the risk of contamination to the ship however. Additional decontamination aboard ships may still be required, especially for landing craft, aircraft, and any ship surfaces possibly contaminated during the recovery. Commanders must balance the risk of contamination to their ships against the need to expediently redeploy forces to maintain mobility and achieve mission objectives.

c. **Other Related Considerations.** Amphibious re-embarkation when CBRN contamination has occurred may require additional support in the form of subject matter experts, specialized units (e.g., hospital ship), general-purpose forces, or additional logistic support to replace contaminated equipment and depleted supplies. Additionally, conducting a NEO from CBRN hazard areas may further strain resources for the medical treatment of casualties, decontamination, mortuary services, transportation, and logistics to support basic sustenance (i.e., food, water, etc.).

d. Re-embarkation for movement to base areas will normally employ administrative loading. Planning considers the customs and agriculture regulations of the destination country and the requisite wash-down and preinspection actions necessary to alleviate delays and the possibility of quarantined cargoes.

e. Initial size of the re-embarkation area depends on several factors such as:

(1) Terrain essential for defense in the event that the embarkation is conducted under enemy pressure.

(2) Number of personnel (potentially including friendly indigenous population) and amount of equipment and supplies to be embarked.

(3) Artillery, NSFS, and air support available for defense, if required.

(4) Nature and extent of usable beaches and ports.

(5) Time available for the embarkation.

f. Planners should consider and develop, when required, options for establishing an ISB to support rearrangement of forces and equipment that cannot be reasonably reconfigured for timely at-sea transfer. An ISB comes with a price, for example, possible loss of deception and surprise, increased personnel requirements, seaport of debarkation, and hardening requirements, and a need for air defense assets and other force protection requirements.

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CHAPTER VII
FIRE SUPPORT

SECTION A. OVERVIEW

1. General

a. Properly planned and executed supporting fires that create lethal and/or nonlethal effects are critical to the success of an amphibious operation. Since the availability and employment of one supporting weapon system influences the requirements for the others, the fire support requirements of all components of the AF should be considered together in planning the employment of fire support means. Fire support planning and coordination in amphibious operations are continuous processes seeking timely and appropriate application of force to achieve the objectives within the operational area. Fire support planning integrates and synchronizes the AF organic fires with nonorganic supporting fires to achieve the commander's intent. Detailed integration of the ATF and LF fire support agencies is necessary. Flexible, parallel C2 architecture that enables decentralized fire support control is used when applicable.

b. Both the ATF and the LF may require fire support during the amphibious operation.

(1) AFs in the AOA or AO normally require fire support for operations such as beach reconnaissance, hydrographic survey, removal of beach and underwater obstacles, and MCM. In addition, aircraft and ships capable of providing fire support must be allocated to protect the force from air, surface, or subsurface attack.

(2) The LF normally requires fire support against shore targets before, during, and after the initial landings. Once sufficient area is seized ashore, artillery can be landed to provide additional fire support. Until ground fire support means (e.g., mortars, rockets, and cannon artillery) of the LF are landed and ready to provide support, fire support is provided by CAS, NSFS, and, in limited cases, direct and indirect fires from adjacent friendly forces.

(3) The LF may require fire support during amphibious withdrawal as the LF exits the beach LZ or DZ.

(4) To the greatest extent possible, fires that create nonlethal effects should be planned in support of all phases of an amphibious operation.

2. Responsibilities

a. Commanders at each level of the LF should:

(1) Establish a fire support coordination agency to conduct fire support coordination during planning and execution of the operation.

(2) Conduct target development and selection.

(3) Determine requirements for air, NSFS, nonlethal effects, and artillery fire support.

(4) Present the coordinated prioritized requests for NSFS and air support to the CATF.

(5) Develop the LF concept of fires to support the scheme of maneuver.

(6) Establish FSCMs, as required.

3. Processes

a. Fires in support of amphibious operations are the cooperative product of three processes: TA, C2, and attack resources. TA systems and equipment perform the key tasks of target detection, location, tracking, identification, and classification in sufficient detail to permit the effective attack of the target. C2 systems bring all information together for collation and decision making. Vertical and horizontal coordination is essential, requiring a hierarchy of mutually supporting fire support coordinators and agencies. Attack resources include fires delivered from air, land, and maritime attack systems. Navy, Marine Corps, Army, and Air Force aircraft may perform air-to-surface attack, including electronic attack (EA), within the operational area. Land-based attack systems typically include Marine Corps and Army artillery, mortars, rockets, missiles, and EA systems.

b. **TA**

(1) The typical AF has numerous organic TA assets, such as reconnaissance units, unmanned aircraft system, maritime and artillery counterbattery radars, naval aviation, and ground sensors, as well as other observers, spotters, and controllers.

(2) The typical AF has the capability to exploit the information provided from nonorganic airborne surveillance and reconnaissance systems (manned and unmanned), subsurface, surface (ground and maritime), military space systems, and national systems. Fire support information could be provided by SOF, interagency and multinational partners, and other nonorganic sources.

(3) The intelligence center established within the AF supports the TA system by coordinating the use of limited collection assets throughout the operational area.

c. **C2 Agencies**

(1) The initiating directive should identify responsibilities for fire support planning and coordination between the commanders of the AF. In planning fire support, the designated commander is the commander who has been delegated the command authority to plan and coordinate fires for either the entire amphibious operation or a particular phase of it. The effectiveness of fire support in amphibious operations is predicated on the supported commander providing clear and coordinated guidance to the forces involved since unity of effort is essential.

(2) The SACC is established on initiation of planning, and plans, coordinates, and controls all organic and nonorganic fires within the operational area in support of the AF. It is located aboard a ship configured with the requisite C2 facilities to coordinate all forms of supporting fires (land, air, and sea-based). The designated commander may choose either the ATF's supporting arms coordinator (SAC), the LF's force fires coordinator (FFC)/fires and effects coordinator (FEC) (if USMC), or the fire support coordinator (FSCOORD) (if USA) to supervise the SACC. Whether the SAC, FFC/FEC, or FSCOORD supervises the SACC, fire support personnel from both the ATF and LF operate the SACC. The organization of the SACC is typically the same for any size amphibious operation; however, variations in the type of amphibious operation may require specific needs. The organization described below is to be used only as a guide. SACC is a single location on board an LHA or LHD in which all communication facilities incident to the coordination of fire support from artillery, air, and NSFS are centralized. This is the naval counterpart to the FSCC and DASC used by the LF.

(a) The ATF staff mans the NSFS section. This section monitors the naval gunfire control net, support net, and other gunfire nets as appropriate. The LF staff provides liaison to the section.

(b) The ASCS is manned by members of a Navy air control agency (e.g., tactical air control squadron or tactical air control group) and directed by the air support coordinator who reports to the Navy TACC watch officer. The Navy TACC watch officer is the equivalent of the CCO and is in charge of ship-to-shore movement by air. This section supports the Navy TACC by controlling, supporting, or transferring control to subsidiary tactical air direction controllers afloat or ashore. The section is located in the SACC and coordinates with the Navy TACC to assist in the deconfliction of air missions, routes, and requests for fires. The LF staff provides liaison to the section.

(c) The target information center (TIC) collects, displays, evaluates, and disseminates information pertaining to potential targets. It should be manned by an ATF target intelligence officer, ATF air intelligence officer, LF target intelligence officer, and other personnel, as required. TIC members will normally operate in the SACC. The ATF target intelligence officer representative to the FFCC supervises the TIC and maintains close liaison with ATF and LF intelligence and operations staff. The LF target information officer normally works in the intelligence center of the AF.

(3) The FFCC is the LF senior fire support coordination agency that plans, executes, and coordinates all fires within the operational area. Prior to control being passed ashore, the FFCC incrementally assumes responsibility for fire support planning and coordination from the SACC. The FFCC is organized and supervised at the MAGTF level by the FFC, who is responsible to the LF operations officer for MAGTF fires. The organization operates at both the tactical and operational level addressing current and future fire support issues. The FFCC coordinates those matters that cannot be coordinated by the GCE (FSCC), ACE Marine TACC, or CSS operations center for integration of fire support plans.

For further information, refer to JP 3-09, Joint Fire Support.

(4) The FSCC is the fire support coordination agency within the LF GCE. FSCCs are established at the battalion, regiment, and division level. The FSCC plans, executes, and coordinates all forms of fire support within the GCE's AO. The FSCC is organized and supervised by the fire support coordinator who is responsible to the appropriate level GCE operations officer for GCE fires. FSCCs are initially subordinate to the SACC and, if the FFCC is established ashore, subordinate to that agency.

d. **Attack Resources**

(1) The AF's organic attack resources are capable of delivering fires and include naval aviation, NSFS, EW systems, artillery, rockets, and mortars.

(2) The SACC and the FFCC are able to coordinate and control nonorganic attack resources in support of the amphibious operation. Aircraft (manned and unmanned), ship-launched missiles, SOF, and systems that create nonlethal effects attacking targets within the operational area must be coordinated through the senior fire support coordination agency.

SECTION B. PLANNING AND EXECUTION

4. Planning

a. The purpose of fire support planning is to optimize the employment of fire support to achieve the supported commander's intent by shaping the operational area and providing support to maneuver forces. Fire support planning is the continuous and concurrent process to analyze, prioritize, allocate, and schedule fire support to maximize combat power of the force.

(1) Commanders determine how to shape the operational area with fires to assist both maritime and land maneuver forces and how to use maritime and land maneuver forces to exploit fires. When developing the fire support plan, the supported commander will publish the guidance for fires. It is from this guidance that supporting and subordinate commanders and fire support personnel begin to frame the role of fire support in the plan. The supported commander's guidance for fires should articulate the desired effects against the enemy's capabilities and how these effects will contribute to the overall success of the operation. Commanders identify targets that are critical to the success of the operation (high-payoff targets), force protection issues, and any prohibitions or restrictions on fire support. A clear determination of the enemy's COGs, decisive points, and critical vulnerabilities is central to fire support planning.

(2) Attack resources may be considered for apportionment and allocation to the AF when developing the fire support plan. In the general sense, apportionment is the percentage of the force given to a specific mission set, while the allocation represents the total number of assets/sorties given to a specific objective. For example, air apportionment is a determination and assignment of the total expected air effort by percentage or priority that should be devoted to the various air operations or geographic areas for a given period of time. In comparison, air allocation is the translation of the air apportionment decision into total numbers of sorties by aircraft type available for each operation or task. The

apportionment and allocation process requires input from the subordinate commands within the AF to ensure their requirements are addressed.

(a) Direct support air requirements and any excess sorties are identified to the establishing authority for further tasking.

(b) Normally, the JFC will apportion assigned air assets (by priority or percentage) to support the AF. The JFC may also task supporting commanders for air support as required.

(3) During the planning phase of joint fires, commanders develop a CONOPS that includes ATF supporting arms. Effective joint fire support depends on planning for the successive performance of the four basic fire support tasks: support forces in contact, support the CONOPS, integrate and synchronize joint fire support, and sustain joint fire support operations.

b. **Targeting**

(1) The AF normally conducts an integrated targeting board to provide broad fire support and targeting oversight functions. Depending on the command relationships that the establishing authority promulgates in the initiating directive, the designated commander coordinates the targeting process for the AF through preparation and submission of target nominations and FSCMs. The supported commander, during the period within which the targets are attacked, has final approval authority over the fire support plan and target list. Those targets to be serviced by organic assets are passed to the appropriate agencies for servicing. Targets requiring servicing by nonorganic attack systems are forwarded to the next higher-level targeting board for consideration. The AF will provide, at a minimum, LNOs to this targeting board (i.e., component level) and may provide LNOs to the senior joint targeting board (i.e., the JFC's joint targeting coordination board), if established. AF targeting timelines are normally out to 72-96 hours to match the targeting timelines and planning cycle of the JFC.

(2) The AF may seek to shape their designated (but not activated) operational area prior to the arrival of AFs through target nominations for attack by other components' forces. Restrictions on the attack of certain targets may also be requested.

For additional information, see JP 3-0, Joint Operations*; JP 3-09,* Joint Fire Support*; and JP 3-60,* Joint Targeting.

c. **Fire Support Coordination.** From the beginning of the action phase until a short time after the first waves land, the LF is normally supported by scheduled fires. Once control agencies (e.g., forward observers and NSFS spotters) are ashore, the LF will normally begin calling for fires to support operations. Coordination is accomplished at the lowest echelon possible. This same principle applies in the planning of subsequent planned fires. Planning is accomplished as required at each level of the LF before daily fire support plans are transmitted to the next higher level for similar action.

For more details on fire support, see JP 3-09, Joint Fire Support.

d. **Other Planning and Coordination Considerations**

(1) Although normally only one SACC is active at any one time, amphibious advance force operations may require the establishment of a fire support agency to coordinate fires in support of the neutralization or destruction of enemy high-value assets or the emergency extraction of SOF or reconnaissance units. The amphibious advance force SACC should maintain situational awareness on the insertions and extractions of teams, locations of teams ashore, and MIW operations within the area, to include sea and air assets. The AF SACC assumes responsibility as the primary fire support agency from the amphibious advance force SACC, upon its arrival in the operational area.

(2) Assault breaching, a part of amphibious breaching, is a preplanned fire support mission using precision-guided munitions to neutralize mines (conventional and improvised) and obstacles in the SZ and on the beach. Assault breaching must be coordinated and synchronized with the maneuver of LF units going ashore; other D-day fires; and ongoing MCM operations, in particular, underwater MCM operations being conducted in the very shallow water (10-40 foot depth contours) region. The Joint Direct Attack Munition Assault Breaching System is capable of breaching mines and obstacle from the 10-foot depth contour to the beach exit. The MCMC, in coordination with the CATF and CLF, plans the breach and determines individual weapon aim points, fuse settings, and priority of effort for the CATF to forward an air support request. Tactical air support is planned and tasked in accordance with the established joint targeting and air tasking process. The breach is conducted by the CATF through the SACC and the Navy TACC.

Additional information on assault breaching is provided in Chapter VIII, "Protection," paragraph 3, "Mine Countermeasures and Obstacle Avoidance or Breaching."

5. Naval Surface Fire Support

a. The CATF prepares the overall NSFS plan based on the CLF and ATF requirements. The plan allocates gunfire support ships and facilities. The CATF establishes the general policy on NSFS targeting priorities. The CLF determines LF requirements for NSFS, including selection of targets to be attacked in pre-assault operations, those to be fired on in support of the LF assault, and the timing of these fires in relation to the LF scheme of maneuver. When designated the supported commander, the CLF coordinates the timing, priorities, and desired effects of fires within the operational area.

b. As a general rule, one NSFS ship provides direct support for a battalion with one NSFS ship providing general support for the regiment.

c. Control of NSFS is exercised by, and passes to, different commands and agencies as the operation progresses.

(1) The amphibious advance force commander has control of NSFS during amphibious advance force operations. Control is normally exercised through the advance force SACC.

Arleigh Burke-class guided missile destroyers are equipped with a 5-inch (127-millimeter) gun.

(2) On arrival in the objective area, the CATF exercises control of the NSFS through the SACC.

(3) When subordinate amphibious task groups are formed and separate landing areas are designated, the CATF may delegate to each attack group commander control of NSFS in their landing area.

(4) Control may be passed to the CLF once the necessary control facilities are established ashore. The CLF then has the authority to assign NSFS missions directly to the fire support ships. The CATF or designated subordinate retains responsibility for allocation of available fire support ships. The CATF also retains responsibility for logistic support and OPCON functions other than control of fires.

d. **NSFS Organization**

(1) The ATF echelons involved in surface fire support are as follows:

(a) The AF is the highest echelon directly concerned with the NSFS of the amphibious operation.

(b) The fire support group is usually subdivided into fire support elements for efficient and effective delivery of gunfire support. When necessary for span of control considerations, an echelon called the fire support unit may be interposed between the fire support group and fire support element. The fire support unit will function similarly to the fire support group; however, fire support unit commanders normally do not deal directly with LF agencies. Each fire support group (or unit when established) is divided into smaller task elements of fire support ships, regardless of type operating in the same general locality.

(c) The individual fire support ship is the basic echelon in NSFS. Its function is to deliver gunfire support under the control or direction of the agency to which assigned. The ship deals directly with the LF agencies.

(2) The LF organization for control and employment of NSFS provides special staff or liaison representation at every level from and including the infantry battalion or comparable troop unit to the highest troop echelon present.

(a) If established, the LF NSFS section provides NSFS communications and facilities for LF headquarters, performs NSFS special staff functions, and directs fires of assigned general support ships.

(b) The division NSFS section or team provides NSFS communications and facilities for division headquarters, performs NSFS special staff functions, and directs employment of assigned support ships.

(c) The regimental or brigade NSFS liaison team provides communications, liaison, and direction of NSFS in support of an infantry regiment or comparable unit. In addition, the team directs the fire of assigned general support ships.

(d) The battalion shore fire control party includes an NSFS liaison team and an NSFS spotting team. The NSFS liaison team is specifically organized to handle NSFS liaison matters for the supported commander, while the spotting team is charged with requesting and adjusting fires of assigned direct support ships and general support ships.

For more information, see NTTP 3-02.2M/MCTP 3-31A, *Supporting Arms Coordination in Amphibious Operations.*

e. **NSFS Plans**

(1) The pre-D-Day NSFS plans, which have the primary objective to prepare the landing area for the assault, usually include the following elements:

(a) Assignment of ships to FSAs and zones of fire.

(b) Communications instructions.

(c) Designation of targets, provision for damage assessments, and acquisition of target intelligence.

(d) Provision for availability of spotting aircraft (manned or unmanned) and reference to appropriate air support plans, to include potential CAS operations.

(e) Provision to coordinate with MCM, underwater demolition, and air operations.

(f) Provision to record target information and report latest intelligence data to the CATF.

(2) The essential elements of the plan for D-day NSFS plans include:

(a) Assignment of ships to FSAs, zones of fire, and in direct and general support of specific LF units.

(b) Location of landing craft approach and retirement lanes, aircraft ingress/egress routes, and necessary coordinating instructions. These same instructions will be found in the appropriate portions of the related air support plan.

(c) Communication instructions and procedures for transfer of control.

(d) Designation of targets, target areas, deep support areas, and probable routes of approach of enemy reinforcements.

(e) Provisions for spotting aircraft.

(f) Instructions for massing fires of several ships.

(g) Provisions to coordinate ship-to-shore movement, MCM, underwater demolition, artillery, and air operations.

(h) Closely timed neutralization of remaining enemy defenses to cover the waterborne and airborne ship-to-shore movements and support of the landing, deployment, and advance of troops.

(i) Degrade enemy C2 ability.

(j) Isolation of the landing area and defense against enemy counteroffensive action by massed fires on probable routes of approach with particular provisions for countermechanized programs.

(3) The post D-day NSFS plans provide for:

(a) Fires on the flanks of the landing area and fires against targets of opportunity.

(b) Defensive targets, night fires, illumination, countermechanized fires, and any special fires utilizing the inherent capability of gunfire ships and available munitions as required.

Additional information on assault breaching is provided in Chapter VIII, "Protection," paragraph 3, "Mine Countermeasures and Obstacle Avoidance or Breaching."

6. Fires that Create Nonlethal Effects

a. Fires that create nonlethal effects are any fires that do not directly seek the physical destruction of the intended target and are designed to degrade the performance of enemy forces, functions, or facilities or to alter the decision making or behavior of an adversary. Fires that create nonlethal effects may be employed so as to incapacitate personnel or

materiel, while minimizing fatalities, permanent injury to personnel, and undesired damage to property and the environment. Employment of fires and information-related activities that create nonlethal effects should be integrated into all amphibious operations to produce synergistic results. Examples include masking smoke or obscurants; nighttime area illumination; and employment of some information-related activities, such as EA, MILDEC, and offensive cyberspace operations, that deceive the enemy, disable the enemy's C2 systems, or disrupt operations.

See JP 3-0, Joint Operations*, for further discussion on considerations, planning, and integration of information-related activities, weapons, and capabilities that can create nonlethal effects.*

b. The SACC coordinates EA against radar and communications emitters until EW control is passed ashore to the LF. The LF headquarters EW coordination cell, or equivalent, or the LF EW officer, if there is no EW coordination cell, coordinates joint aspects of LF EW requirements.

c. The ATF and LF OPORDs should contain specific instructions on the procedures to request EW and other forms of fire support that creates nonlethal effects from resources within or external to the ATF and on EW coordination cell actions required to coordinate or process these requests.

7. Offensive Air Support

a. Offensive air support requires an integrated, flexible, and responsive C2 structure to process CAS and other air support requirements and a dependable, interoperable, and secure communications architecture to exercise control.

b. **Air Support Planning Responsibilities**

(1) The CATF determines overall air support requirements of the ATF, determines air support capabilities, coordinates all air support requests, and prepares an air plan.

(2) The CLF determines LF air support requirements, determines LF air support capabilities, submits plans for deployment of aviation elements ashore, and prepares an air plan.

(3) The JFACC provides JFACC representation, determines JFACC air support capabilities, submits deployment plans, and prepares supporting air plans.

c. **Air Support Planning Considerations**

(1) All aircraft operating within the objective area must be under centralized control of a tactical air control system. A combination of positive and procedural control measures may be required.

(2) Plans should usually provide for rapid seizure of existing airfields, airfield capable sites, and sites for early warning and air control. This enables the early deployment ashore of aviation elements and extends the radius of warning and control.

d. The LF plans for the employment of LF aviation to support the ship-to-shore movement and scheme of maneuver ashore. Basic planning also establishes requirements for air support from the other elements of the AF and joint force. Any enemy facilities to be captured intact must be specified and placed on the no-strike list or restricted target list.

(1) Recommendations and requests from subordinate echelons of the LF are evaluated and consolidated with overall LF requirements into a comprehensive request for air support. When determining overall requirements, pre-D-day should be separated from D-day and post-D-day requirements.

(2) LF requests for pre-D-day air operations are to satisfy intelligence needs and offensive air operations to reduce enemy forces and defensive installations in the landing area. The scope of pre-D-day operations may be limited by the need for surprise. The standard joint tactical air strike request is used for air support requests.

(3) LF requests for air support of operations ashore commencing on D-day include identification of targets to be attacked, their priority, timing of attacks, and desired effects. The request may be in the form of an air schedule with amplifying instructions appended. During the ship-to-shore movement, preplanned air strikes assist in creating exploitable gaps within the landing area. During the critical period when landing craft, amphibious vehicles, tiltrotor aircraft, and helicopters are making the final run to the beach or LZ, aircraft integrated with NSFS to support maneuver assist in neutralizing the beaches, LZs, approach routes, and adjacent key terrain features as the LF comes ashore.

(4) Post-D-day air support can only be planned in general because requirements will depend on the tactical situation ashore and will not be fully known in advance. Applicable pre-D-day and D-day air operations are continued.

e. **Air Support During the Assault**

(1) Until the TACPs arrive with assault units ashore, CAS missions are executed under the direction of the tactical air coordinators (airborne) and the terminal control of the forward air controllers (airborne). When the TACPs are established ashore, they request CAS from the Navy TACC. The Navy TACC assigns aircraft to missions as requests are received and in accordance with the commander's guidance for priority of fires. As the landing progresses, air control elements to be established ashore land and prepare to operate shore-based facilities for control of air operations.

(2) As air support control agencies are established ashore, they function initially under the Navy TACC. These agencies subsequently operate under the designated authority when control of CAS has been passed ashore by the CATF. In any case, requests are sent by the TACP directly to the air control agency, which assigns aircraft to CAS missions. TACP requests are monitored by the SACC and FSCC or fires cell.

(3) The terminal phase of a CAS strike is executed under the control of a joint terminal attack controller or forward air controller (airborne). CAS missions are executed only on the approval authority granted by the commander of the supported LF.

See JP 3-09.3, Close Air Support*, for more information.*

8. Ground-Based Fire Support

a. Ground-based fire support comes under the cognizance of the MAGTF. The two principal ground-based assets available to the CLF commander are field artillery and mortars. Artillery furnishes close and continuous fire support to neutralize, destroy, or suppress targets that threaten the mission of the supported command. Mortars provide immediately available, responsive, indirect fires in support of the LF scheme of maneuver. Mortars also reinforce direct fire during close combat.

b. The artillery fire plan is normally formulated in the fire direction center (FDC). These centers are the elements of a command post, consisting of gunnery and communications personnel and equipment, which the commander uses to exercise fire direction and/or fire control. The FDC receives target intelligence and requests for fire and translates them into timely and effective tactical and technical fire control in support of ongoing operations.

c. Some planning tasks, such as counterfire procedures and scheduling of fires, may occur in the supported unit's FSCC (division or regiment) when multiple supporting arms are being integrated into the fire support plan. Remaining artillery fire planning tasks, such as fire direction, resupply, and positioning to meet the fire support requirements, are then performed at the appropriate FDC.

d. If it is not possible to coordinate artillery support at lower echelons, the requisite coordination with air and NSFS assets is accomplished in the SACC.

See JP 3-09, Joint Fire Support*, and NTTP 3-02.2M/MCTP 3-31A,* Supporting Arms Coordination in Amphibious Operations*, for more information.*

9. Multinational Considerations

a. Fire support coordination in multinational operations demands special arrangements with MNFs and local authorities. To maximize the fires of the MNF and to minimize the possibility of friendly fire, the CATF and staff should be familiar with each nation's capabilities and limitations in munitions, digital capability, and training to ensure they develop good fire support coordination throughout the MNF.

b. Fire support coordination may be required with multinational partners that are providing fire support from outside the designated AOA.

See JP 3-16, Multinational Operations*, and Allied Joint Publication-3,* Allied Joint Doctrine for the Conduct of Operations*, for additional information on multinational operations.*

CHAPTER VIII
PROTECTION

SECTION A. OVERVIEW

1. General

Protection of the AF is essential for all amphibious operations but especially during ship-to-shore movement. The JFMCC will synchronize and coordinate operations between the AF and other forces (SOF and other naval and joint forces) to counter and neutralize enemy aircraft, submarines, surface combatants, small boats, land-based antiship cruise missiles, antiship ballistic missile coastal defenses, mines, and other potential conventional and asymmetric threats to the AF en route to and within the AOA to gain local maritime and air superiority. Maritime superiority permits the conduct of amphibious operations without prohibitive interference by the opposing force. During the planning phase of an amphibious operation, the active protection of the ATF and LF is one of the most important considerations. The inherent nature of amphibious operations limits the ability of the CATF to employ passive protection measures once in the AOA.

For additional information on defense of the ATF, see NWP 3-02.14M/MCTP 13-10G, Defense of the Amphibious Task Force.

2. Protective Measures

The LF must arrive in the landing area without critical reduction of its combat power. Measures necessary for protection of the LF elements in transit from the sea include all measures taken by any task force operating at sea. This includes operations to locate, classify, and track surface vessels, submarines, and aircraft and, if required, apply force against them. By establishing local maritime superiority in both the open oceans and the AOA or AO, naval forces directly support the ability to project defense and assure access for the LF. Gaining and maintaining advantage throughout the AOA/AO is necessary.

SECTION B. MINE COUNTERMEASURES AND OBSTACLE CLEARANCE AND AVOIDANCE

3. Mine Countermeasures and Obstacle Avoidance or Breaching

a. Sea mines and MCM have figured prominently in the Civil War; Spanish-American War; both World Wars; Korea; numerous Cold War crises; and in Operations ERNEST WILL, DESERT STORM, and IRAQI FREEDOM. Admiral David G. Farragut's command in 1864 at Mobile Bay during the Civil War to "...damn the torpedoes [mines], full speed ahead…." was made easier by two months of extensive MCM operations that included reconnaissance, mine hunting, and technical exploitation of captured weapons. Mines also contribute to contested environments.

b. Elements of MIW which can be used in support of amphibious operations include mining (offensive, defensive, and protective) and MCM (offensive, including strategic strike against mine stocks or minelayers, and defensive, including avoidance of mined waters,

operational deception, and active use of MCM platforms to hunt or sweep for active enemy mines). In the current operational environment, coastal defenses against amphibious operations have become a military necessity for a number of countries considered a threat to regional stability and national interests.

c. The preferred tactic for AFs operating against countries or organizations employing coastal defenses is to avoid, bypass, or exploit gaps in these defenses whenever possible. However, operational limitations may preclude this tactic and a breach of these defenses may be required. The capability to counter mines and other obstacles (either conventionally manufactured and configured or locally improvised) is, therefore, essential to the conduct of amphibious operations. Coastal mining may interfere with littoral maneuver at sea, in the SZ, and on the beach. Specifically, it may affect amphibious advance force operations, ship-to-shore movement, and possibly hinder or preclude unloading of the LF.

d. Planning for operational timelines, allocation of intelligence collection assets, AF task organization, the rate at which forces are established ashore, and deception operations can be affected by a mine threat. The CATF should request available organic, national, and theater intelligence assets when there are suspicions that the AOA or AO may be mined.

4. Antilanding Doctrine

a. **Enemies often employ integrated antilanding capabilities that have incorporated the use of land, maritime, air, and, in some cases, space assets.** These capabilities involve integration of reconnaissance, long-range interdiction by air and sea forces, and a combined/arms ground force at the beach.

b. In most cases, enemies will employ mines as an economy of force defensive measure. In addition, some countries may base their coastal defense on the threatened employment of WMD or may integrate WMD into their existing coastal defenses. Coastal defenses depend on the hydrography, terrain, resources, development time available, and ingenuity of the enemy. Antilanding doctrine usually focuses on the development of four layered barriers within the littorals. These barriers may be under observation and covered by shore-based fires. The four barriers from the littorals to land are perimeter, main, engineer, and beach.

(1) **Perimeter Barrier. The perimeter barrier holds the perimeter minefield, is located at the maximum range of shore-based covering fires, and is intended to delay and break up the ATF prior to arrival in the AOA.** Integrated fire is used to protect defensive obstacles from assault force's attempts to breach those barriers. Delays at the perimeter minefield could allow coastal defenses time for final preparation and movement of forces to potential landing beaches. Antiship cruise missiles and coastal artillery may provide covering fires. Electric and diesel submarines and aircraft may attempt to attack the AF.

(2) **Main Barrier. The main barrier holds the primary minefield.** This minefield is intended to deny the maneuver of ATF ships and landing craft during ship-to-shore movement. Land-based artillery, air defense systems, and possibly small boats and aircraft cover the main barrier.

Minefields and obstacles are placed along avenues of egress off the beach and in front of defended positions.

(3) **Engineer Barrier. The engineer barrier is located at or near the shoreline and contains both minefields and nonexplosive, anti-landing obstacles.** The engineer barrier is positioned in very shallow water and the SZ. The engineer barrier is designed and constructed by land force engineers to exploit the operational characteristics of landing craft, amphibious, and tracked vehicles. It is positioned to reinforce the effect of existing terrain features so that it disrupts, turns, fixes, or blocks the LF's assault formation. The barrier is integrated with an engagement area that is subjected to enemy observation and fires.

(4) **Beach Barrier. The beach barrier canalizes the LF for counterattacks.** The beach barrier is located in natural avenues of egress between the landward edge of the SZ and beach exits. It contains minefields and anti-vehicle obstacles that are positioned to disrupt the operational tempo and canalize the tactical formation of a LF. These obstacle effects, combined with enemy observation and integrated fires, will enhance the effectiveness of an enemy counterattack against the LF.

5. Responsibilities

The CATF has overall responsibility for MIW within the sea areas of the operational area. This includes the planning and execution of all facets of MIW supported by the MIWC and MCMC and assigned forces or the MCM commander (if assigned) and providing the logistics support and force protection for MCM assets. The MIWC or MCMC will direct air and surface MCM assets, to include conducting MCM operations, including breaching outer mine barriers from deep water to the very shallow water, and underwater MCM forces conducting underwater MIW in very shallow water. The CATF conducts assault breaching operations from the seaward edge of the SZ to the agreed upon line of demarcation. This line of demarcation is mutually agreed upon by the CATF and

CLF and identifies geographic limits of their respective clearance responsibilities and is supported by planning input from the MIWC or MCMC. The CLF conducts mine and obstacle breaching and clearing operations from the line of demarcation on the beach landward and for follow-on clearance operations on the beach. Above all, MCM and amphibious breaching operations must be synchronized. The CATF and CLF share responsibility in integrating these operations into the overall strategy to support littoral maneuver and the subsequent ship-to-shore movement and landing plan.

6. Planning and Execution

a. The following planning considerations should be made when conducting MCM and amphibious breaching operations in support of amphibious operations:

(1) **MIW Planning Facilitation**. The CATF and CLF should incorporate MCM planners throughout the amphibious planning process. Potential issues include the location and size of the AO in comparison to available MCM assets; slow surface MCM transit times to the AO; ability of surface MCM operations to meet established deadlines; the number and location of the beaches, boat lanes, approaches, and ship transit areas required to be cleared or surveyed for mines; and requirements for protecting assets involved in the surface MCM effort. Accomplishing this will enhance the ability of AF units to achieve surprise and rapidly project combat power through littoral maneuver; build up troops, equipment, and supplies ashore; or to conduct ship-to-objective maneuver to areas deeper inland. The incorporation of MCM expertise in amphibious planning in any instance where enemy mining is anticipated is critical to successful MCM support of the amphibious objectives.

(2) **Reconnaissance and Surveillance.** An AF should request national and theater collection assets to conduct reconnaissance and surveillance of the defended coastal area early in the planning process to determine the best landing area to conduct the breach. The AF may utilize organic reconnaissance assets to identify obstacles and conduct beach surveys. The collection plan and request should focus on location of mines, obstacles, and enemy locations in the area, to include air, naval, and ground forces. The compatibility of the beach and the suitability of the area for available landing craft and vehicles, including maneuver area, tidal levels, and beach slope and composition, should be considered.

(a) **Mine Threat.** The types, characteristics, numbers, storage locations, transportation assets, and at-sea delivery capability are vital information.

(b) **Operational Area Characteristics.** Efforts required to clear a minefield depend significantly on the mined area's physical environment. Water depth and beach characteristics are key factors. Significant ocean currents increase the difficulty of sweeping moored mines. Tidal ranges expose mines in very shallow water, making them easy to detect but placing a burden on clearing teams to finish their task within a prescribed time limit. High densities of clutter that looks like mines, on the bottom, complicate operations. Once the landing area is chosen, the coastal defenses in the vicinity are degraded to the desired level through supporting and prelanding operations conducted by AF and other forces, to include the full spectrum of MCM forces.

(3) **Local Air and Maritime Superiority.** Local air and maritime superiority in the operational area is normally required for the MCM forces to commence operations. This may require naval and joint assets to provide the necessary protection.

(4) **Offensive MCM.** A key consideration in any potential littoral conflict is the establishment of ROE that enable early, aggressive, and proactive MCM operations. If ROE permit, MCM is best accomplished by preemptive destruction of mines prior to their deployment. Offensive MCM includes attacks that create lethal and/or nonlethal effects on production and storage facilities, transportation assets, and forces used to lay mines. Supporting operations may also be conducted for offensive MCM and to wear down land forces. A key consideration in any potential littoral conflict is the establishment of ROE that enable early, aggressive, and proactive MCM operations.

b. **MCM Forces.** The time required for MCM operations will usually require MCM forces to commence operations prior to the arrival of the AF and, potentially, the amphibious advance force. Legacy MCM ships have slow transit speeds and may require a heavy lift ship to transport them to the AO if not already forward deployed. MCM helicopters, MCM forces, marine mammals, and unmanned undersea vehicle platoons may also require the use of amphibious warfare ships or other platforms to conduct operations. The CATF and CLF should consider that an amphibious warfare ship or afloat forward staging base, for example, could be required to support MCM operations and plan for any subsequent impacts on amphibious warfare ships load outs and the overall landing plan. The vulnerability and relatively slow rate of speed in which MCM forces operate should be taken into account when considering use of MCM during supporting or prelanding operations. Due to the limited assets available for an MCM operation, the CATF will need to prioritize the MCM effort in the AO. MCM operations have the potential to compromise OPSEC of the impending amphibious operation with significant impact on the success of the LF. Opposed landings are arguably one of the most difficult and dangerous large-scale military operations and the element of surprise should be preserved by all available means. Therefore, overt MCM operations that threaten the element of surprise should be kept to a minimum and conducted as close as practicable to the arrival of the AF in the AOA. Deception operations may maintain the element of surprise if overt MCM operations are necessary. The principal techniques to accomplish active MCM are mine hunting and minesweeping.

(1) **Mine Hunting.** During mine hunting, the MCM platform uses its available assets to detect, classify, identify, and neutralize all mine-like contacts found. In favorable hydrographic conditions, mine hunting is the preferred method for conducting enabling MCM. Mine hunting does not require specific knowledge of the mine threat and provides a means to estimate the remaining risk to transiting vessels. However, it is a time-consuming operation limited by the acoustics, visibility, and topography of the underwater environments in the operating area.

(2) **Minesweeping.** Minesweeping is the water-based technique of clearing mines using mechanical, explosive, and influence sweep equipment. Mechanical sweeping removes, disturbs, or otherwise neutralizes the mine; explosive sweeping causes sympathetic detonations in, damages, or displaces the mine; and influence sweeping

produces either the acoustic and/or magnetic influence required to detonate the mine. It is performed at slightly faster speeds than hunting, but its success is largely a factor of environmental conditions and the intelligence data available relating the operational characteristics of the mines being swept. Minesweeping does not provide an accurate estimate of the remaining risk.

c. **Assault Breaching.** The assault breaching mission is planned by the MIWC/MCMC using Joint Direct Attack Munition Assault Breaching System mission-planning tools; coordinated via the Navy TACC; and conducted by organic, supporting, or strategic strike air assets (USN strike fighters or USAF bombers), using the Joint Direct Attack Munition. Lane requirements of the LF and mine or obstacle construction will dictate size and composition of the amphibious breach sortie. During assault breaching efforts involving munitions, large lane widths exponentially increase the number of weapons required to neutralize beach obstacles and mines. The CLF should carefully consider the SZ lane widths, the requirement for surprise, and the tactical needs of the LF when relying upon delivered munitions. Suppression, obscuration, security, reduction, and deception are additional elements that should be applied to amphibious breaching operations to ensure success.

(1) **Suppression.** Effective suppression is the mission-critical task during any breaching operation. Suppression protects forces conducting obstacle reduction and maneuvering through the obstacle and fixes the enemy in position. Suppressive fires

Estimated to cost about $1,500, an unsophisticated contact mine that was based on a 1908 Russian design caused some $96 million in damage in 1987 to the frigate United States Ship Samuel B. Roberts (FFG-58), shown above with damage to the hull as seen from dry dock, almost causing the ship to sink.

include the full range of fires that create lethal and/or nonlethal effects from NSFS and CAS to EA.

(2) **Obscuration.** Obscuration hampers enemy observation and TA and conceals friendly activities and movement. EA prevents the enemy use of radar to observe and tactical radios to report what is being observed at the landing beach.

(3) **Security.** Support forces prevent the enemy from interfering with obstacle reduction and the passage of the assault waves through the breach lanes. Security must be effective against coastal defenses and counterattack forces. Vertical assault forces may seize and deny routes of ingress into the landing area to prevent the counterattack of the landing beaches.

(4) **Reduction.** Reduction forces, normally composed of aircraft dropping modified Joint Direct Attack Munition, create lanes through minefields, barriers, and obstacles, enabling the assault waves to attack through the barriers/obstacles via breached lanes. The location of lanes depends largely on identified weaknesses in the mine and obstacle belt. If the AF cannot find gaps or weak coverage in the obstacles, they should apply concentrated force at a designated point to rupture the defense and create a gap. Responsibility for operation and maintenance of breached/proofed/marked lanes is transferred to follow-on elements of the LF that expand upon initial reduction efforts and conduct follow-on clearance and unexploded explosive ordinance disposal.

(5) **Deception.** Deception operations are a necessity during assault breaching efforts. Large lane sizes demand large numbers of weapons and multiple aircraft passes to clear the SZ prior to the assault. This may draw immediate attention to the LF unless alternate lanes are brought under fire as well.

For more information on MIW and breaching, see JP 3-15, Barriers, Obstacles, and Mine Warfare for Joint Operations; *NWP 3-15/MCTP 13-10J,* Naval Mine Warfare; *NTTP 3-15.24/MCRP 13-10J.1,* Mine Countermeasures in Support of Amphibious Operations; *and ATP 3-90.4/ MCTP 3-34A,* Combined Arms Mobility Operations.

SECTION C. DEFENSE OF THE AMPHIBIOUS TASK FORCE

7. Air Warfare

Defensive counterair includes all measures designed to detect, identify, intercept, and destroy or negate enemy air and missile forces attempting to attack or penetrate through friendly airspace. These operations employ both active and passive measures to protect US or MNFs assets and interests.

For additional information on defensive counterair operations, see JP 3-01, Countering Air and Missile Threats.

8. Surface Warfare

a. To assure access for the AF, SUW-capable forces will be required to operate in the open ocean, the approaches to the littorals, and the more difficult littoral environment. The objective in each operating area is the same: gain and maintain maritime superiority to protect the AF. Because of unconventional threats and asymmetric tactics that may be encountered during amphibious operations, the SUW challenge expands well beyond the traditional war-at-sea scenario which pits similarly constructed, clearly defined naval forces against each other in a known theater of action. SUW capabilities should continue to include response options for conventional threats, but naval and joint forces conducting SUW operations should also be prepared for potentially more dangerous unknown enemies employing nontraditional methods to challenge US objectives. Just as conventional enemy surface combatants present a threat to maritime superiority, terrorists using small, lightly armed boats loaded with explosives or otherwise as a vehicle-borne improvised explosive device can present challenges to maritime security. When an improvised explosive device is deployed in a manned vessel, it is categorized as a manned vehicle-borne improvised explosive device in a maritime environment.

(1) SUW operations in an open ocean environment consist primarily of sea control operations to gain and maintain maritime superiority in the surrounding area to enable forces the ability to accomplish required missions. SUW in the open ocean environment typically involves protecting vital sea LOCs, convoy and merchant escort, defense of naval strike groups supporting strike forces, and the AF.

(2) The inner and outer boundaries of the littoral operating environment are not clearly defined. However, geography is a key factor. As the operational environment transitions from the blue water to the littoral, maneuvering the force and the conduct of SUW becomes increasingly difficult. Threat vessels can use geographic features to hide or commercial activities (e.g., merchant shipping routes, fishing areas, oil platform support) to mask their intentions. Speed; organic weapons; and embarked aviation assets, including unmanned vehicles, are important for SUW success. SUW tasking in littoral regions will likely be conducted within the territorial waters of another nation. A thorough understanding of the law of the sea, as it pertains to the jurisdiction and sovereignty exercised by nations, and the international legal status and navigational rights of warships and aircraft is required before commencing operations. The mission will determine whether the resources available for SUW are sufficient. However, as the focus shifts from the open ocean to the littoral, additional collaboration with other warfare commanders will be necessary to leverage forces for effective employment. The SUWC will normally flex resources to support other mission areas and to respond to threats emanating from the sea or from land. In some instances, the focus will be from seaward toward the beach such as support to amphibious operations or strike missions.

(3) The threats and limitations associated with littoral operations are compounded by a lack of freedom of maneuver due to enclosed areas, especially when the AOA is in a concave area of the shoreline. Maintaining situational awareness is vital in the littoral environment. Combat identification is complicated by the density of surface craft in the immediate vicinity of forces. Integration with the AMDC to provide integrated

force defense, as well as self-defense capabilities, is a primary consideration. Asymmetric threats are more likely in this operating area and close proximity to land places operational forces in multiple threat envelopes without a clearly defined threat axis.

b. Joint forces may significantly enhance SUW capabilities to defend the AF and suppress potential adversaries, especially when operating in littoral environments. Joint forces may contribute to SUW in the following areas:

(1) Fires—fixed-wing and rotary-wing aircraft can engage surface maritime targets with guns and/or missiles (e.g., AC-130 and F-35B, as well as AH-64, AH-1, UH-1, and MH-60 helicopters).

(2) Intelligence, surveillance, and reconnaissance assets contribute to situational awareness (e.g., USAF E-3 AWACS [Airborne Warning and Control System], unmanned aircraft system, USN E-2, USN, USA, and USMC helicopters).

(3) C2 support.

(4) Special operations.

(5) Raids ashore.

c. **Threats to the Maritime Force**

(1) The traditional surface threat to maritime superiority ranges from large combatant-like cruisers and frigates to much smaller combatants such as patrol boats, patrol gunboats, torpedo boats, and missile boats. Surface combatants equipped with surface-to-surface missile or surface-to-air missile systems that have a surface engagement capability pose a serious threat to maritime forces. Combatants armed with gun systems, torpedoes, or mines pose a secondary surface threat. The threat from torpedoes launched from surface ships will increase as more modern guided torpedoes become readily available to the enemy.

(2) Larger surface combatants belonging to countries with established navies deploy offshore to protect designated areas or to operate in contingency areas, while smaller surface combatants, antiship cruise missile-equipped patrol boats, and fast attack craft/fast-inshore attack craft can be expected to operate in coastal defense roles in difficult littoral environments The most widespread threat to maritime superiority in a traditional warfare environment comes from missile-equipped patrol craft. Built to operate in shallow coastal waters, they normally patrol in waters contiguous to the homeland. These small craft, operating singly or in groups, may be equipped with rocket launchers, cannons, machine guns, and antiship cruise missiles. The inherent characteristics of patrol craft are speed, agility, low-radar signature, and familiarity with the operating area. These characteristics, combined with effective detection and C2 networks and potent missile systems, make them a formidable foe, especially in a littoral environment. Even when not armed with antiship cruise missiles, most surface combatants have some SUW and mine-deployment capability. Most combatants have surface-to-air missiles that have an SUW mode as a secondary capability, and many have antiship torpedo systems and a mine-

deploying capability. Naval guns can also present a threat to surface forces and are found on nearly all surface combatants.

(3) Submarines are the best equipped of all force types to operate in a covert or clandestine manner in a hostile environment. Many submarines can threaten the AF well beyond the effective operational radius of land-based aircraft that may oppose AF operations. Diesel-electric attack submarines provide a readily deployable weapon system for a variety of peacetime and wartime missions for the enemy. Diesel-electric submarines may be armed with torpedoes, antiship missiles, guns, mines, or a mix of these weapons. Coordination with the ASW commander is a key planning element for all SUW operations.

(4) The main air threat to forces conducting SUW operations comes from sea- or land-based multirole aircraft, including bombers, fighters, maritime reconnaissance patrol aircraft, and helicopters armed with guided and unguided weapons. Although designed primarily to attack land targets, fighter-bombers are a threat because of widespread availability and combat radius. They may be armed with antiship missiles, bombs, rockets, or guns. Many littoral nations have maritime reconnaissance patrol aircraft, which can also be armed with SUW weapons such as antiship cruise missiles, rockets, bombs, torpedoes, and mines. Additionally, many types of military helicopters are readily available and could pose a threat to SUW operations. They are capable of carrying a variety of weapons, including antiship cruise missiles, rockets, and guns. Coordination with the air warfare commanders and JFACC (when assigned) should be a part of every ATF SUW plan.

(5) Many nations and some non-state groups have coastal defense systems that integrate coastal area surveillance, engagement of enemy forces, and support of friendly forces operating in the area. A coastal defense system usually includes radar stations (stationary or mobile), to provide coverage in the area of interest and various weapons systems. Additional information resources may include acoustic sensors, human intelligence, communications intelligence, sightings by commercial surface vessels (e.g., fishing vessels), surface combatants, auxiliaries, submarines, reconnaissance aircraft, unmanned reconnaissance aircraft, and satellites. Weapon systems, depending on the geographical features of the coastline, may include surface-to-surface missile systems (which may be fixed or mobile), torpedoes, and controlled minefields situated along the coastline at focal points or in restricted waters. When operating in littoral areas, the coastal defense system capabilities of the bordering nations and other relevant actors (e.g., terrorist groups) should be considered.

(6) The ATF may have limited air and missile defense/antiair warfare assets, especially at the ARG and single-ship level, and should use them to destroy or reduce incoming air threats to an acceptable level. The ATF's classification, identification, and engagement area is typically much smaller than the CSG's. The problem of distinguishing friendly, neutral, and enemy aircraft while employing various weapons systems is a complex task under normal circumstances. In the littorals, the complexity is further increased due to the confinement of the operational area. It is critical to establish airspace control measures that ensure identification of all joint/coalition airborne assets to prevent friendly fire and identify incoming threats. It is also critical that the force bases the

decisions on a combined and shared operating picture. These operations are frequently characterized by confined and congested water and airspace occupied by friends, the enemy, and neutrals, which makes rapid identification and efficient coordination profoundly difficult.

(7) In an emergency defense of the ATF scenario, the relationship between the Navy TACC and the warfare commanders becomes paramount to the survival of the ATF. Unless the warfare commander has a predetermined emergency defense of the ATF plan or assigned assets, they may have to coordinate immediate support from the Navy TACC. The Navy TACC will then coordinate the dynamic retasking of available air assets with the applicable battle watch captain, warfare commander, and/or LFOC to meet the requirements of the requesting warfare commander.

For more information on legal considerations regarding the law of the sea, see JP 1-04, Legal Support to Military Operations.

9. Antisubmarine Warfare

a. Control of the undersea portion of the operational area and establishing a defensive perimeter of the AOA or operational area are vital to the success of amphibious operations. To counter the enemy submarine threat, the JFC may coordinate, and when required, integrate assets from the joint force to conduct ASW during all phases of an amphibious operation.

b. Although often viewed as a Navy-only mission, the JFMCC may utilize a variety of joint forces (air, land, maritime, space, and special operations) to facilitate or conduct ASW in support of amphibious operations.

c. While the JFC is responsible for ASW planning inside the JOA, coordination of ASW plans and activities with commands outside the JOA is essential and may require close coordination with other USG departments and agencies and multinational partners.

d. The safe and effective employment of ASW assets conducting coordinated ASW in littoral waters poses a significant problem to the CATF. Ships, helicopters, and submarines each bring unique capabilities to the ASW problem. The highly variable acoustic properties of the underwater environment, especially in the littorals, will impact the ability to detect, identify, track, and engage enemy submarines. Factors that may affect these properties include surface shipping (including those components of the ATF and commercial shipping), inherent environmental noise and oceanographic properties, and seasonal weather patterns. Acoustic sensor placement is highly dependent on the acoustic properties of the water space. Because acoustics will not be the sole detection capability, an environmental assessment will be required to identify the requirements for non-acoustic detection systems (e.g., satellite imagery, electronic intercept, visual acquisition).

e. A thorough understanding of the enemy's ability to conduct submarine warfare in the littorals is essential. Denying the enemy submarines the ability to close the sea areas may prevent an undersea attack of high-value targets in the sea echelon during ship-to-shore movement and in the close support and distant retirement areas.

f. Protection of surface units or commercial shipping may require emphasis on ASW near operating areas, sea LOCs, chokepoints, friendly and neutral ports, or other critical areas. ASW operations may continue through the arrival of the AFOE, withdrawal of the AF, or until the submarine threat is neutralized.

g. Successful coordinated ASW depends upon effective use of each ASW asset and a well-promulgated acoustic and nonacoustic search plan. Sensor employment should be carefully considered in the CONOPS. Sensor platforms defending a congested AOA should be placed to optimize sensor performance while minimizing the threat to the sensor platform. The ability of the sensor to discern an enemy submarine may be hampered by acoustic properties of the littorals and the congested AOA

10. Landing Force Support to Defense of the Amphibious Task Force

a. Depending on the situation, the CLF may be called upon to help defend the ATF before, during, or even after the landing. The AF is especially vulnerable when operating in potential confined waters within the AOA or AO and while transitioning straits. The LF may assist in a supporting role, but it is neither designed, trained, nor equipped for the roles normally assigned and fulfilled by escorts, such as cruisers, destroyers, submarines, and other Navy assets. Further, serving in this role may also degrade the capabilities of the LF's mission ashore or within the AOA or AO.

b. Depending on the established support relationship, LF aviation assets may be used to support defense of the ATF, understanding the risk of potential reduced availability of these assets (maintenance and other issues) to carry out the amphibious operation. Risk to the ATF shall be weighed against the risk to the LF mission. The CATF and CLF shall continuously analyze threats and assess the availability of resources to make sound and timely decisions. In planning, there should never be an assumption that the LF will be available to conduct defense of the ATF. If there are deficiencies in the required capabilities needed to defend the ATF, the CATF must request the JFC or JFMCC allocate the appropriate naval and joint assets for escort, defense, and shaping.

c. The CLF, in a supporting role, may be able to designate a quick reaction force to provide limited self-defense (e.g., snipers or a weapons company) against a surface threat and low-altitude air defense against an air threat. Cross-decking of these personnel and their weapons and equipment may not be desired once deployed but may be executed at the discretion of the CLF. To ensure availability and employment options, early planning for this type of capability should occur between the CATF and CLF. The incorporation of LF quick reaction force teams into the ship's battle orders and internal communications plan is required. Some details that need to be coordinated:

(1) C2:

(a) How will the command to fire go from the commanding officer or tactical action officer to the Marine firing the weapon?

(b) What communication architecture is required?

(2) What are the ROE and who is responsible for briefing the ROE?

(3) What are the sectors of fire?

(4) What are the quick reaction alert statuses (60-minute, 15-minute, etc.)?

(5) Who activates the quick reaction force and how is it announced? Which quick reaction force (sniper, crew-served weapons, or low-altitude air defense) is required?

(6) Who sets the alert status and who changes the status?

(7) Whose ammunition is going to be used?

d. The Marine CE may provide C2, information operations support, and snipers. Similarly, the GCE can provide snipers and crew-served weapons, and the ACE can provide aircraft and the low-altitude air defense detachment weapons systems.

e. A support relationship between the CLF and the CWC or appropriate warfare commander may need to be established.

For additional information on defense of the ATF, see NWP 3-02.1.4M/MCTP 13-10D, Defense of the Amphibious Task Force.

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CHAPTER IX
INTELLIGENCE AND COMMUNICATIONS

"The secret of all victory lies in the organization of the non-obvious."

Marcus Aurelius (Roman Emperor, AD 161-180)

SECTION A. INTELLIGENCE

1. Introduction

a. **Intelligence Support to Amphibious Operations.** Because amphibious operations are characterized as the most complex and difficult of military operations, intelligence activities should consider all aspects of the operational environment that drives timely and informed decision making. The JFC should consider the size and duration of the operation and the organic intelligence capabilities of the AF when establishing either a joint intelligence support element or an operational-level joint intelligence operations center to support the AF. The joint intelligence support element or joint intelligence operations center will be the central node in securing theater- and national-level intelligence support for the AF and provide direct intelligence support to AF components. Amphibious operations differ from other military operations because of the significant challenges posed by relatively fewer AF intelligence assets in the operational area during the planning phase, a heavy initial reliance on national and theater collection assets, and the transition of C2 ashore and in the case of a withdrawal from ashore to afloat.

For more information, see JP 2-01, Joint and National Intelligence Support to Military Operations.

b. **Intelligence Capabilities.** The following intelligence capabilities are required to support amphibious operations:

(1) Interoperable information systems that provide timely dissemination of information for amphibious planning, rehearsals, and execution.

(2) Information management systems, to include C2 applications and collaborative information sharing, to coordinate collection and dissemination efforts. These systems support information management plans, which should be integrated into and fully support mission requirements.

(3) Standoff collection assets capable of satisfying ATF and LF requirements from OTH.

(4) Intelligence dissemination systems linking widely dispersed forces afloat and ashore.

(5) Flexible intelligence assets capable of rapidly transitioning ashore with minimal degradation of support.

2. Planning and Execution

a. Intelligence Process

(1) **Planning and Direction.** The ATF and LF intelligence officers direct their personnel from the intelligence center established aboard amphibious warfare ships to support the intelligence needs of the entire AF. The intelligence center brings together all AF intelligence-related activities. While personnel and material remain organic to their respective commands, they may task organize to perform intelligence work necessary for completion of the mission.

(2) **Collection.** AF intelligence requirements are serviced by all available intelligence, surveillance, and reconnaissance capabilities (national, theater, and organic). Supporting force or prelanding collection operations are often required to confirm and further develop the operational picture. An aggressive prelanding intelligence effort will provide support for target nomination. However, the collection effort must not expose the commander's intent. AFs should request national and theater collection assets to conduct reconnaissance and surveillance of coastal areas early in the planning process to determine the best landing areas to conduct the entry. Detailed astronomical, climatological, METOC, hydrographic, and topographic information to identify suitable penetration points (e.g., beaches, LZs, DZs) is required as well.

(3) **Processing and Exploitation.** During processing and exploitation, raw collected data is converted into forms that can be readily used by commanders, decision makers at all levels, intelligence analysts, and other consumers.

(4) **Analysis and Production.** During the analysis and production phase, all available processed information is integrated, analyzed, evaluated, and interpreted to create products that will satisfy the AF commanders' requirements. Individual intelligence sections within the AF will normally concentrate on particular areas of expertise, satisfying their units' requirements while contributing a broad-scope product to the general intelligence production effort. For example, LF intelligence could analyze the land operational environment, to include the enemy's C2, ground forces, logistics, and reserves, while ATF intelligence could analyze enemy maritime forces and coastal defense threats. Air threats could be analyzed from a combined AF perspective.

(5) **Dissemination and Integration.** Intelligence dissemination and integration during amphibious operations presents significant challenges. AF and supporting forces can be widely dispersed and may not assemble until late in the planning phase, if at all. Advances in technology have improved intelligence dissemination between forces, but limitations still exist in the quantity and quality of intelligence exchanged. The immense volume of data available may overburden communications and intelligence systems. Intelligence officers at all levels, working in coordination with unit operations and communications and information systems officers, develop plans that provide dissemination of actionable intelligence in a timely manner to all elements of the AF. Units located on ships not equipped with the latest C2, communications, or intelligence systems will need to be included in the dissemination plan and should be a high priority for these

products. Rather than an end of a process, the integration of intelligence is a continuous dialogue between the user and the producer.

(6) **Evaluation and Feedback.** During the evaluation and feedback phase, intelligence personnel at all levels assess how each phase of the intelligence process is being performed. Commanders and staffs throughout the AF provide feedback if they are not receiving anticipatory, objective, timely, accurate, usable, complete, and relevant information to support the operation. Within the intelligence center, the AF intelligence officers are also evaluating the intelligence process to improve performance.

b. **Key Intelligence Activities**

(1) **Mission Analysis**

(a) **Preliminary Intelligence Studies.** The AF will develop preliminary intelligence studies and estimates on receipt of the initiating directive or when alerted of the potential operation. Preliminary planning will encompass an analysis of the operational area and the possible impact of terrain, hydrography, weather, local populace, and cultural features on the proposed operation, as well as threat capabilities such as order of battle, known locations, and capabilities that could be used to deny access. The most favorable areas for executing the landing are determined and additional intelligence requirements defined. Studies of beaches, ports, communications networks, existing air facilities, and terrain provide an initial basis for determining the number and types of LF elements that can be accommodated and supported within possible landing areas. These studies assist in the initial engineering and other Service support requirements.

(b) **Initial Intelligence Estimate.** Many of the primary decisions made during the planning process are based on the initial intelligence estimate. The initial intelligence estimate serves to orient the AF commanders and their staffs to the operational environment aids in the development of the commander's intent by outlining what is operationally possible and most advantageous and assist in formulating the commander's guidance to help shape intelligence operations. At a minimum, the initial estimate should provide the commander with information on the general weather and sea state conditions expected in the objective area; key terrain and man-made features and avenues of approach; the location, nature, and extent of available beaches, including their respective operational constraints; and the general composition, strength, and disposition of adversary forces in the area, including all CBRN capabilities, coastal defense cruise missiles, antiship cruise missiles, and air defense systems. It should also include the location and characterization of toxic industrial material located within or transiting the AOA.

(2) **COA Development.** Intelligence operations support COA development in several ways.

(a) Products from the JIPOE process may be included as an annex or distributed as separate studies and reports and should include, at a minimum:

1. Weather studies (mapping, charting, and geodesy).

2. Astronomical data in the operational area.

3. Climatological and meteorological studies.

4. Tidal and ocean current data in the operational area.

5. Hydrographic data in the operational area

6. Topographic data, to include terrain impact on communications system and trafficability analysis.

7. Beach and LZ studies.

8. Air facilities.

9. Ports and harbors.

10. Special studies on the threat.

11. Sociocultural analysis on the civil component.

For more information, see JP 2-01.3, Joint Intelligence Preparation of the Operational Environment.

(b) Continuously update the view of the operational environment and estimates of threat capabilities, intentions, and activities.

(c) Provide focus on the threat through identification of threat COGs, critical vulnerabilities, and potential COAs, with emphasis on the most likely and most dangerous COAs.

(d) Assist in the prioritization of targets.

(3) **COA Analysis.** Intelligence operations assist COA analysis to:

(a) Identify and refine most likely and dangerous threat COAs and their potential impact on the LF and actions and reactions to friendly COAs under consideration.

(b) Emulate the threat as a red cell during wargaming.

(c) Develop an independent evaluation of each friendly COA based on an understanding of the operational situation and the threat response, as well as on the ability to provide intelligence support to that COA.

(d) Help to focus commanders and their staffs on the threat and environment, with emphasis on the degree of uncertainty and resulting risk associated with each friendly COA.

(4) **Plans and Orders Development.** Once the AF COA has been mutually selected, intelligence operations are focused to collect against specific priority intelligence requirements and update relevant intelligence. This detailed intelligence collection strategy is documented in the intelligence annex to the ATF and LF OPLAN/OPORDs. The intelligence annex prescribes the conduct of intelligence operations and activities and describes the methodology through which information and intelligence may be disseminated, reconnaissance and surveillance missions assigned, and other intelligence tasks and procedures stated. Drafts of the intelligence annex should normally be distributed to other commanders in advance of the OPLAN/OPORD for use as planning studies. The volume and complexity of the material in the intelligence annex dictates the use of appendixes.

c. **Intelligence Support**

(1) Intelligence support provides a continuous flow of tailored intelligence to the AF to maintain a common operational picture of the operational environment while rapidly identifying new intelligence requirements of commanders and the operating forces. The AF, or elements thereof, may receive significant intelligence information while en route to the operational area. This is particularly true in situations where amphibious advance forces or forces external to the AF conduct pre-D-day operations in the AOA, AO, or where remote sensor data is provided. The AF's intelligence center disseminates timely, pertinent intelligence information to the CATF and CLF.

(2) Intelligence support provided to the LF during operations ashore focuses on furnishing information that provides an exploitable advantage over the enemy. Accordingly, the focus on intelligence operations is to provide information necessary to build situational awareness, identify the latest enemy activities and friendly opportunities, aid friendly maneuver and targeting, and support force protection, all while continuing to support future operations planning. Two key factors for ensuring effective intelligence support during these operations are:

(a) Intelligence operations are focused where they can have the greatest impact and value. A detailed, well-thought-out concept of intelligence support in accordance with the CLF's intent and synchronized to LF CONOPS will lead to the best allocation of intelligence capabilities.

(b) Intelligence collection, production, and dissemination plans are developed to support the execution of AF tactical operations, the engagement of targets, the protection of the force, and the development and selection of branches and sequels. Close and continuous coordination between intelligence and LF operations personnel is essential to maintain common situational awareness of ongoing and planned future operations, monitor potential enemy reactions, identify new opportunities, and assess the impact of friendly actions on the enemy.

d. **Critical Information Requirements.** By satisfying the AF's critical information requirements and supporting the LF's main effort, intelligence operations help generate operational tempo. They facilitate operational tempo by supporting the decision-making

process through accurate situational awareness and by recognizing emerging patterns that enable the CLF and subordinate commanders to rapidly make decisions.

3. Multinational Intelligence Considerations

a. **General.** Every AF deploys with USN and USMC intelligence staff that should plan to conduct intelligence operations and share intelligence products with multinational partners. These staffs must coordinate with the geographic combatant command foreign disclosure officer (FDO) as early as possible to determine what classified military information may be shared with participating foreign governments and international organizations, in accordance with National Disclosure Policy (NDP)-1, *(U) National Policy and Procedures for the Disclosure of Classified Military Information to Foreign Governments and International Organizations.*

b. **Maintain Unity of Effort.** Intelligence personnel should view the threat from multinational as well as national perspectives. A threat to one element of the MNF is a threat to all MNF elements. Success in intelligence sharing requires establishing a trusted partnership with foreign counterparts to counter a common threat and maintain a unity of effort. This trusted partnership may be developed by the JFC to be leveraged by the AF during years of shaping operations

c. **Plan Early and Plan Concurrently.** FDOs determine what intelligence may be shared with the forces of other nations early in the planning process, in accordance with NDP-1. As soon as an AF learns who its multinational partners or as they prepare to deploy into a theater of operations, they should contact the geographic combatant command FDO to determine what policies and procedures may apply.

d. **Share Necessary Information.** Through a deployed FDO, the AF should share relevant intelligence about the situation and enemy with its multinational partners consistent with respective guidance from higher authority. Intelligence information belonging to another DOD organization or intelligence community agency may only be released to MNFs if marked for release or authorized for release by that organization through the foreign disclosure review process.

(1) US intelligence information should be written at the lowest possible classification level and the least restrictive dissemination restriction. Originator of intelligence must minimize the use of the "Not Releasable to Foreign Nationals" caveat in favor of "Releasable To" a list of authorized countries and add the "Releasable by Information Disclosure Official" to maximize the FDO's ability to further disseminate the intelligence without originator approval. Intelligence production agencies often use a "tear line" or releasable paragraphs in non-releasable intelligence documents to allow for extraction and sharing of information that does not compromise sensitive sources or methods.

(2) Intelligence support is critical to the commander's inherent force protection mission. Every effort should be made to share data that could impact the commander's force protection mission.

(3) It is equally important that multinational partners release intelligence (from their own intelligence communities) to the AF to be fused into the common operational picture. Foreign government information will be properly marked and protected at the same level as US classified information, consistent with intelligence community and DOD policies.

e. **Conduct Complementary Operations.** Intelligence efforts of each nation should be complementary. Each nation will have intelligence system strengths and limitations, as well as unique and valuable capabilities. Furthermore, JFC planning with friendly nations to fill shortfalls, especially linguist requirements, may help overcome such limitations. All intelligence resources and capabilities should be made available to fulfill all intelligence requirements. Establishing a multinational collection management element is essential for rapidly planning and coordinating multinational collection operations.

f. **Multination Intelligence**

(1) A multinational intelligence center might be necessary for merging and prioritizing the intelligence requirements from each participating nation and for acquiring and fusing all the nations' intelligence contributions. Likewise, the center should coordinate the intelligence collection planning and intelligence, surveillance, and reconnaissance operations of each nation. The multinational intelligence center should include representatives from all nations participating in the multinational operation. Designating a single director of intelligence for the multinational command may assist in resolving potential disagreements among the multinational members.

(2) When establishing a multinational intelligence center, the AF must take into account that not all multinational partners may be eligible to receive intelligence at the same level and care must be taken to avoid the perception that certain partners have greater access to US intelligence.

Additional guidance on intelligence operations in multinational operations can be found in JP 2-01, Joint and National Intelligence Support to Military Operations. *Information on principles and constructs to support multinational operations can be found in JP 3-0,* Joint Operations, *and JP 3-16,* Multinational Operations.

SECTION B. COMMUNICATIONS SUPPORT

4. Overview

Amphibious operations require a flexible communications system capable of supporting rapid decision making and execution to maintain a high tempo of operations. These systems should be reliable, sufficient for the mission, flexible, sustainable, survivable, and as expeditionary as the AF. Communications system architecture should provide strategic and tactical connectivity to a variety of tailored AFs, multinational partners, and USG departments and agencies, as well as other commanders and participants in the amphibious operation. In austere tactical environments, such as may be seen in amphibious raids, the communications network may not be robust and may be severely

degraded when disturbed. The AF should plan for, provide C2 for, and support all functional areas (e.g., fires, aviation, intelligence, CSS) afloat and ashore.

For additional information, see JP 6-0, Joint Communications System*, and CJCSM 6231.01,* Manual for Employing Joint Tactical Communications.

5. Communications Responsibilities

a. The CATF and CLF are responsible for communications system support planning, with the supported commander consolidating the requirements. The communications system support plan reflects the coordinated communications system requirements of the AF. The requirements may include radio and weapon guidance and control frequencies; call signs; compatible cryptographic and authentication systems; and special communications equipment, computer equipment and systems, or support.

(1) The communication systems support plan describes the communication systems requirements of the AF in terms of circuits, channels and systems required, and policies and procedures governing the operation and coordination of the overall system. The plan includes the items listed in Figure IX-1.

(2) The plan is prepared in detail to facilitate use by commanders at all echelons.

(3) The plan should include en route, intertheater, and intratheater communications and systems requirements.

b. Specific CATF responsibilities include the following:

Communications System Support Plan

- General coverage of the communications situation, including assumptions, guiding principles, and the concept of operational communications employment.
- Announcement of the communications mission.
- Delegation of communications tasks and responsibilities to major elements of the force.
- Detailed instructions for organizations, installation, operation, coordination and maintenance of the communications system.
- Assignment and employment of call signs, frequencies, cryptographic aids, and authentication systems.
- Instructions on countermeasures, operations security, and communications security.
- Interoperability of computer systems, to include hardware and software.
- Logistic support for communications and electronics.

Figure IX-1. Communications System Support Plan

(1) Prepare and promulgate coordinated plan for employment of AF communications during the operation.

(2) Acquire and assign necessary communications assets to subordinate elements of the force.

(3) Prepare appropriate cybersecurity guidance.

(4) Provisions for necessary shipboard communications system and services in support of the embarked LF.

(5) Develop a coordinated communications plan for the ATF for inclusion in the overall communications system support plan.

(6) Develop and promulgate a plan for communications connectivity with other maritime forces, to include possible MNFs.

c. Specific communications system support planning responsibilities of the CLF are to:

(1) Develop a coordinated communications plan for the LF component of the AF for inclusion in the overall force communications system support plan.

(2) Develop and promulgate a plan for communications connectivity with the JFC, other components, and other ground forces ashore, to include possible MNFs.

(3) Request LF computer and network resources and support while embarked.

(4) Identify connectivity requirements prior to movement ashore for follow-on operations, if required.

d. Due to the limited availability of AF communication assets, commanders of other embarked forces should submit their communication requirements for inclusion into the communications system support plans as early as possible.

6. Communications Planning Considerations

a. An effective communications system support plan:

(1) Provides an EMCON plan and information security posture that balances OPSEC versus operational requirements.

(2) Supports cyberspace defense and cyberspace security actions to protect the network against unauthorized activity and to protect information from exploitation.

(3) Avoids mutual interference throughout the EMS. Communications system support plans of the AF are integrated into the JFC's joint communications electronics operating instructions.

(4) Deconflicts friendly EA with other friendly frequency use.

(5) Provides friendly forces' position reporting to the Global Command and Control System-Maritime common operational picture.

(6) Identifies alternative means of communications to assist in reducing mutual interference and decreasing frequency requirements and to help ensure availability of communication networks.

(7) Provides access to METOC forecasts and information impacting amphibious planning and execution.

(8) Incorporates MNF requirements into communications plans.

(9) The topography when operating in enclosed bays or estuaries and the vicinity of mountains may affect communications paths. Communications support requirements in amphibious operations are summarized in Figure IX-2.

b. Each major command of the force should have compatible and interoperable communications that will support the tactics and techniques employed by that force. Circuits provided must assure effective exercise of command and coordination of supporting fires.

c. Subordinate commands of the AF may operate in widely separated areas during some phases of the amphibious operation. The communications plan permits rapid integration of the force without undue interference between elements.

Communications Support Requirements

A reliable, secure, rapid, flexible, and interoperable command and control, communications, and information system is required in both planning and execution.

- Support planning.
- Control ship-to-shore movement.
- Coordinate protection of the amphibious force.
- Control assault vehicles and craft.
- Monitor command and control of amphibious advance force operations.
- Coordinate supporting arms.
- Coordinate logistic support and combat service support.
- Coordinate support provided by other forces.
- Medical regulation.
- Coordinate use of communications and electronic warfare.
- Support the landing force scheme of maneuver.

Figure IX-2. Communications Support Requirements

d. Local frequencies and communications standards in use in the landing area should be considered to ensure compatibility and to prevent interference.

e. Communications system connectivity should be established among all major participating commands at commencement of the planning phase.

f. When AF are supporting other operations, such as FHA or NEO, the communications plan should consider the capabilities and requirements of other USG departments and agencies and international organization and nongovernmental organization communications, as well as the local government or populace being assisted.

g. The LF communications plan is normally issued as an annex to the OPLAN or OPORD and should be compatible with the overall communications plan of the AF. The actual drafting of the communications plan is the staff responsibility of the LF assistant chief of staff, communications/communications system staff section (G-6). Throughout the preparation of the plan, the G-6 coordinates with each staff section of the LF, as well as equivalent staff officers at parallel and subordinate commands. The G-6 counterpart on the ATF staff is the communications officer or the Navy component communications staff officer. The G-6 and Navy component communications staff officer conduct concurrent and parallel planning to:

(1) Allocate shipboard radio equipment, spaces, and personnel to support LF operations.

(2) Assign call signs, coordinated with the CATF to facilitate handling of LF traffic over naval circuits during all phases of the amphibious operation.

(3) Identify cryptographic and authentication systems that are used by ATF and LF units.

(4) Develop COMSEC procedures.

(5) Evaluate assigned radio frequencies for optimal performance, to prevent mutual interference, and ensure adequacy of support for LF operations.

(6) Determine use of LF personnel to support the ships' communications personnel during the movement to the objective and during the initial stages of the action phase.

(7) Develop computer networks that support the LF communications while embarked, including procedures for the receipt and distribution of message traffic.

h. The LF will embark in functionally operational spaces normally built on a Navy C2 infrastructure. These spaces will be complete with permanent access to voice, data, and video systems necessary for the LF's situational awareness. They will form the LF operational spaces, which are collectively known as the LF operations center. The infrastructure is based on joint standards and architectures and enables units to draw upon a baseline of communications system capabilities, regardless of their Service.

i. The LF communications system support by phase is as follows:

(1) Communications system connectivity between the AF commanders and staffs should be established immediately at commencement of the planning phase. Units of the LF must ensure preservation of COMSEC even though great distances may separate the various planning headquarters. The worldwide defense message system, supplemented by SECRET Internet Protocol Router Network (SIPRNET) e-mail and secure telephone, provides the major communications means during this phase.

(2) In the embarkation phase, commanders should provide for adequate communications system support between the AF and any external agencies involved in transportation. The CLF normally plans and provides LF communications systems at the piers and beaches within the embarkation areas, to include coordinating the use of established facilities (military or civilian). A significant portion of the LF's organic communications equipment will be packed and ready for embarkation, so the CLF should make arrangements with the area's local commander to provide communications support. Specifically, the plan should establish:

(a) Ship-to-shore circuits for the control of loading (closely coordinated with the CATF).

(b) Convoy circuits for serials moving from point of origin to seaport of embarkation.

(c) Communications between the port of embarkation and the embarkation area, including the contracted use of commercial assets if feasible.

(d) Communications between control points within the embarkation area.

(e) Communications center and switching center operations within the embarkation area.

(3) The rehearsal phase of the amphibious operation gives the CLF the opportunity to test the LF communications plan. Under ideal conditions, the rehearsal will involve all elements of the force and attempt to fully test the communications systems involved without violating OPSEC or COMSEC procedures. By having a full-scale rehearsal, the CLF can further refine communications requirements and identify critical vulnerabilities, thus enabling appropriate adjustments to the OPLAN or OPORD before execution. Specific considerations during the rehearsal phase include:

(a) Maximum use of secure voice equipment and use of minimum power on electronic emitters for COMSEC reasons.

(b) Use of call signs and frequencies for rehearsal use only.

(c) Plans to repair or replace communications equipment damaged during the rehearsal.

(d) Plans to allocate and embark expendable items (e.g., wire and batteries) for use during the rehearsal.

(e) Plans to allocate enough time to conduct an after action review of the communications plan after the rehearsal and to modify portions of the plan as necessary.

(4) During the movement phase, the CATF normally establishes EMCON and River City policies to restrict the use of equipment, particularly transmitters and emitters, to prevent disclosure of locations, movements, and intentions of the force. The LF plan addresses how the commander will communicate with LF units embarked on different ships, and possibly even separate movement groups, during EMCON. Some potential alternate means are helicopter messenger, visual signals, or line-of-sight radio if permitted by the EMCON condition. Other LF communications considerations include:

(a) Communications guard assignments for all elements of the LF.

(b) Communications officers with the ATF have an accurate list of appropriate LF units (e.g., next senior and immediate subordinate) and their assigned shipping location.

(c) ATF communications officers have an accurate listing of message release authority within the LF.

(d) ATF communications officers have an accurate listing of LF communications personnel embarked in their respective ships. The list should also contain clearance and access information of these LF personnel.

(e) Establishment of LF communications centers, or equivalents, on all ships when major LF units are embarked.

(5) During the action phase, both the ATF and LF rely on radio communications and tactical chat as the means for exercising C2. Accordingly, EMCON is modified by the CATF prior to H-hour to test all circuits before the ship-to-shore movement begins. During the initial portion of this phase, when the major LF headquarters are still afloat, LF circuits are provided by facilities specifically installed in amphibious warfare ships for use by LF personnel. LF communications should be complementary and generally parallel to those established by the ATF. These parallel systems usually terminate at each significant control center aboard the amphibious warfare ships (e.g., SACC, Navy TACC, AATCC, and TACLOG group). The LF communications plan addresses the many operational aspects of the action phase.

(a) Communications for control and coordination of landing ships, landing craft, and other waterborne vehicles moving from the transport area to landing areas are provided primarily by the CATF through a Navy control group. However, LF radio nets should be integrated into the group's plan so LF commanders can properly monitor and control the movements of the LF, especially important when the ship-to-shore movement includes LF organic AAVs.

(b) Communication nets for the control and coordination of the assault support helicopters are established and maintained through the Navy TACC and AATCC. LF personnel will augment the ATCS and integrate LF communications into the overall aviation C2 systems. Helicopter and tiltrotor movement normally generate additional, long-range communications requirements for the LF because of the inherent distances associated with helicopter operations.

(c) Whether supervised by the ATF's SAC or the LF's FFC, the SACC coordinates and controls all organic and nonorganic fires in support of the AF until the LF establishes adequate control and communications facilities ashore. The LF communications include nets that integrate all agencies that interface with the SACC. These include, but are not limited to, the NSFS, the air support section, the TIC, the FFCC/FSCC/fires cell of the LF, fire support observers, TACPs, forward air controller (airborne) and tactical air coordinators (airborne), and artillery FDCs.

(d) High-frequency communications may be restricted due to hazards of electromagnetic radiation to ordnance and hazards of electromagnetic radiation to fuels.

(e) Selected units and agencies of the LF are required to assist the CATF to control and coordinate logistics during the action phase. LF communications provides a means for the control of medical evacuation, EPW collection, and foot and vehicular traffic ashore, as well as the means to control the movement of supplies and equipment. Landing support units are required to establish communications within the CSS area. This communications network includes the Navy beach parties, TACLOG group, supported LF units, helicopter support teams and transport aircraft (if applicable), SACC, DASC (once established ashore), and other key agencies within the ATF and LF.

(f) In addition to high-frequency communications, satellite communications may be used to support OTH operations, depending on the scheme of maneuver.

j. In the transition of LF command posts ashore or afloat, the CLF should consider:

(1) The command post movement from ship-to-shore should be accomplished in a manner that provides for communications continuity during the entire action phase. LF units are almost entirely dependent on netted radios during the early stages before they can gradually transition to wire, wire-multichannel radio, computer network systems (e.g., SIPRNET), messengers, or other means. The conduct of this transition governs the development of the LF communications system and is crucial to the seamless transition of effective C2 from the agencies afloat to those established ashore.

(2) A command post movement from ship-to-shore is normally made in two or more echelons, depending on the type and size of the headquarters. Each echelon requires a near equal communications capability to be planned out in detail by the CLF and staff. Furthermore, the commander, staff, and supporting personnel that make up a particular command post may be embarked on separate ships. In that case, radio communications should be established between the two or more groups of the command post as soon as practical.

(3) When an advance party is sent ashore before the major echelons of a command post, direct radio communications are required between the advance party and the command post afloat. The type and quantity of communications equipment and personnel assigned to the advance party should be weighed against the need for those assets back at the command post during the action phase.

(4) When in transit from ship-to-shore, the CLF and appropriate staff members require communications with LF units already ashore (including the command post advance party if employed), LF units also in transit, LF units remaining on shipping, and appropriate ATF agencies afloat. The communications facilities normally available to the CLF (e.g., C2 configured helicopter or AAV) will usually not be able to satisfy the total communications requirement; therefore, the communications facilities should be allocated to only the most essential circuits.

For additional information, see JP 6-0, Joint Communications System.

7. Multinational Considerations

a. Multinational communications system operations may be composed of allied and/or coalition partners. A MNF can be composed of diverse groups of security and information sharing environments. MNFs will likely have differences in their communications system, classification limitations, language, terminology, doctrine, operating standards, capacity to share information, and willingness to share information, which can cause confusion and interoperability problems in the AOA. Once the JFC establishes the specific C2 organization for an amphibious operation with multinational partners, the information exchange requirements and information services are established as communications system planning begins. Planning considerations include network federation, governance, and management of a federated network; EMS management; equipment compatibility; procedural compatibility; application and configuration management compatibility; cybersecurity policy implementation, including requirements for cryptographic security; identification, friend or foe; lessons learned from previous operations; video networks (video teleconferencing, sensor video feeds, commercial news feeds, and global broadcast services); and data link protocols. The AF should:

(1) Establish liaison early.

(2) Identify communications system requirements early.

(3) Standardize principles and procedures, which may mean non-US doctrine may be employed.

(4) Coordinate agreements in advance of military operations.

(5) Provide/acquire interpreters

(6) Determine releasability.

(7) Identify network device configurations, including network administration policies and network security policies.

(8) Identify cross network domain criteria.

(9) Comply with JFC disclosure policy and ensure ready access to a trained FDO.

(10) Provide training on communication system services.

b. Communications requirements vary with the mission, size, composition, geography, and location of the MNF. It is critical that operations and communications planners begin the coordination process early to ensure both US and MNF communication requirements are identified and sourced prior to operations. Interoperability is often constrained by the least technologically capable participant. Effective communications support enables control over diverse, widely dispersed air, maritime, land, and space elements.

c. In all multinational operations, a secure, broadband, unclassified network will be a critical requirement for multinational coordination with all participants within the MNF AO.

d. LNO teams should be sent to other MNF headquarters to facilitate integration of operations. These LNO teams should deploy with sufficient communications equipment to conduct operations with their respective headquarters.

For more information on multinational communication considerations, see JP 3-16, Multinational Operations; *JP 6-0,* Joint Communications System; *and Allied Tactical Publication-08,* Doctrine for Amphibious Operations.

CHAPTER X
SUSTAINMENT

"The logistical effort required to sustain the seizure of Iwo Jima was enormous, complex, largely improvised on lessons learned in earlier… operations in the Pacific…. Clearly, no other element of the emerging art of amphibious warfare had improved so greatly by the winter of 1945. Marines may have had the heart and firepower to tackle a fortress-like Iwo Jima earlier in the war, but they would have been crippled in the doing of it by limitations in amphibious logistical support capabilities. These concepts, procedures, organizations, and special materials took years to develop…."

From Closing In: Marines in the Seizure of Iwo Jima, 1994, Joseph Alexander

SECTION A. Overview

1. General

a. The CATF and the CLF have co-responsibility for determining overall sustainment requirements for the AF. Those requirements that cannot be supported from resources available within the ATF are directed to the applicable Service component through the chain of command as established in the initiating directive.

b. The requirement for afloat forces to provide support to the LF during the period in which the LF logistic system is primarily sea-based has a significant influence on logistic planning for an amphibious operation. Like all logistic systems**,** the AF logistic systems must be responsive, simple, flexible, economical, attainable, sustainable, and survivable. Development of effective logistic systems takes into account the planning considerations and factors listed below:

(1) **Planning Considerations**

(a) Orderly assembly and embarkation of personnel and materiel based on anticipated requirements of the LF scheme of maneuver ashore.

(b) Establish and maintain a logistic system in the operational area that will provide adequate support to all elements of the AF and subsequent support of base development and garrison forces as directed.

(c) Impetus of logistic support from the sea, or the rear, and directed forward to the point of application at the using unit.

(d) Preservation of OPSEC during logistic planning. Nonsecure logistic planning can compromise tactical surprise and landing location.

(e) In threat or contested littoral environments where logistics may be constrained, any reductions, for example, in energy use, through fuel conservation or efficiency, may be important for mission success.

(2) **Planning Factors.** Logistic planning factors are as follows:

(a) Type, size, and duration of the operation, including the anticipated date that support should commence and will no longer be needed.

(b) Objective area characteristics, such as geography, climate, distance from support bases, host-nation support, transportation systems and networks, LOCs, local contracts for goods and services, and throughput capacity.

(c) Enemy capabilities.

(d) Strength and composition of LF.

(e) Support base resupply methods.

(f) Compatibility and capability of logistics support systems.

(g) Communications means.

(h) Enemy CBRN capabilities.

(i) Availability of AE and AFOE shipping.

(j) Indigenous health risks and diseases prevalent.

(k) Requirements for rehabilitation or construction of airfields.

(l) Support required for detainees.

Additional guidance for joint logistic operations in support of amphibious operations is contained in JP 4-0, Joint Logistics*, and JP 4-01.6,* Joint Logistics Over-the-Shore*.*

2. Responsibilities

a. **The CATF:**

(1) Establishes priorities, allocates resources, and coordinates logistic requirements for all elements of the ATF.

(2) Determines requirements that can be met by internal resources. Those which cannot are directed to the supported commander or the appropriate Service through the chain of command.

(3) Notifies appropriate responsible agencies of any unusual requirements or special supplies or equipment required as early as possible.

(4) Provides the means required to establish and operate a logistic system in the designated AOA.

(5) Develops plans for movement and sustainment of detainees and civilian evacuees.

(6) Develops overall plan for evacuation of casualties.

(7) Prepares logistics annex to the OPLAN.

b. **The CLF:**

(1) Determines overall logistic requirements of the LF, including units, special equipment, and shipping.

(2) Allocates the means to meet LF logistical requirements. Requests support from the AF for those requirements that exceed the LF organic capabilities.

(3) Determines logistic requirements that cannot be met by the LF. Those which cannot are directed to the CATF, supported commander, or the appropriate Service through the chain of command.

(4) Develops the plans for the supplies and equipment to be embarked, including the supplies and equipment of other assigned forces for which the LF is responsible.

(5) Prepares the LF embarkation and ship loading plans and orders in coordination with the CATF.

(6) Plans for the coordination, conveyance, and distribution of logistics required by the LF.

(7) Prepares the logistics annex to the LF OPLAN.

c. Other designated commanders of the AF will submit logistics requirements to the CATF or appropriate commander for those requirements that cannot be met internally.

SECTION B. PLANNING AND EXECUTION

3. Combat Service Support

a. The necessity to provide logistics to the LF when the logistic system is primarily sea-based requires coordination between the AF commanders to develop a control and delivery system that will provide the LF with the necessary support from embarkation through rehearsal, movement, execution, and continued operations ashore. Wherever possible, sustainment planning should include direct ship-to-user delivery.

b. Logistics planning should include considerations for initial supply and sustained operations.

(1) **Initial Supply** comprises the logistic levels for both the AE and AFOE to provide required initial support for the assault landing and initial operations ashore. Plans for initial supply include the following:

(a) ATF should:

1. Load ships with supplies to prescribed levels.

2. Provide rations for LF while embarked.

3. Provide special facilities required for refueling and maintenance of aircraft, landing craft, amphibious vehicles, and other equipment, as well as fuel for boat pools, beach groups, transportation pools, and other shore components.

4. Provide water for the LF ashore until supply from sources ashore is available.

5. Provide medical support until equivalent capability can be established ashore.

(b) LF should:

1. Assemble supplies to be landed with the LF in such a manner as to facilitate availability for issue before and during debarkation.

2. Establish pre-staged air-lifted supplies.

3. Plan logistic supply or staging points ashore (if required) and the onward distribution of those supplies to forward units.

4. Develop captured material disposition instructions.

5. Develop salvage instructions.

6. Develop retrograde instructions.

(c) The CATF and CLF may plan for the use of floating dumps, which are sent ashore by the appropriate control officer, who directs their landing as requested by the troop commander concerned.

(2) **Sustained operations** require logistics support transported to the landing area in follow-up shipping and aircraft to support tactical operations ashore.

(a) Sustainment is provided through either one or a combination of the following methods:

1. On-call shipping and aircraft to be ordered into the landing area by the CATF, as requested by the CLF.

2. Fixed schedules for bringing shipping or aircraft into the landing area, as planned by the CLF.

(b) Factors affecting selection of a sustainment method include:

1. Distance between the landing area and loading points.

2. Availability of forward sheltered ports or anchorages.

3. Requirement for convoy escort.

4. Availability of aircraft dedicated for sustainment lift.

5. Hostile activity on LOCs.

6. Plans for general engineering support, including facilities required to accommodate supplies and the phase-in of LF units to handle supplies.

7. Availability of manning, MHE, and lighterage to off-load shipping.

8. Availability of LOTS resources.

c. Logistics and CSS plans are prepared by the CATF, CLF, and other designated commanders in the AF. These plans will include at a minimum:

(1) Supply and resupply responsibilities, schedules, and sources.

(2) Levels of supply to be carried in AE, AFOE, and follow-up shipping.

(3) Control and distribution of supplies.

(4) Plan for landing supplies.

(5) Engineering and construction requirements.

(6) Air delivery responsibility, procedures.

(7) Captured material disposition instructions.

(8) Salvage instructions.

(9) Retrograde.

(10) Casualties (support and evacuation procedures).

(11) Initial laydown of material resources.

(12) Mortuary affairs support and evacuation of human remains.

4. Key Constructs

a. From the CSS standpoint, the ship-to-shore movement is divided into two time periods:

(1) **Selective Unloading.** The selective unloading period is responsive to the requirements of LF units. During the early part of the ship-to-shore movement, CSS is provided on a selective basis from sources afloat. Movement of CSS elements to the landing beaches or LZs closely follows the combat elements. As the assault progresses, CSS units are established ashore and support is provided from within the BSA and from sources afloat. Normally, selective unloading parallels the landing of nonscheduled units during the initial unloading period of the ship-to-shore movement.

(2) **General Unloading.** Normally, general unloading is undertaken when sufficient troops and supplies have been landed to sustain the momentum of the attack and when areas are able to handle the incoming volume of supplies. When adequate assault supplies are ashore and BSA is organized, secure, and operating satisfactorily, the CLF recommends that general unloading begin.

b. In the initial stages of the amphibious operation, CSS is principally concerned with the provision of combat-essential supplies such as rations, water, ammunition, and fuel normally drawn from LF stocks transported by AE and AFOE shipping. Other essential services, including medical support, are provided within the capabilities of the AF. Other CSS functions are of secondary importance during the early stages of the ship-to-shore movement and will normally not be involved in the scheduled waves.

c. **BSA and CSSA.** As the operation progresses and CSS units are phased ashore, the initial landing support organization is disestablished and its functions are assumed by the LFSP. BSAs, initially developed by the landing support elements, may be disestablished, consolidated, or expanded into CSSAs to provide continued support to the LF. The need for CSSAs and their number, size, and capabilities are situation dependent and are primarily influenced by the scope and duration of the operation.

d. **BSA and CSSA Defense.** The LF OPORD will specify the security commander and the task organization designated to perform BSA or CSSA defense.

e. **TACLOG Groups and the LFSP.** The CLF places special emphasis on the importance of CSS coordination during the ship-to-shore movement by establishing TACLOG groups and the LFSP.

f. **Seabasing.** In some cases, it may be undesirable or unnecessary to transfer substantial LF supplies and CSS organizations ashore. Seabasing enables CSS assets to remain at sea and be sent ashore only when needed. CSS capabilities should be balanced aboard those amphibious warfare ships best suited to provide support.

g. **Sea Echelon Area Plan.** The sea echelon area plan normally reduces the concentration of amphibious warfare ships in areas near the beach. The majority of shipping will remain in distant retirement or close support areas until called forward in

accordance with established priorities. In such cases, the out-of-sequence landing of supplies and equipment will cause delays in the established schedule.

h. **Embarkation, Movement, and Rehearsal Support.** Although the primary emphasis of CSS planning is to develop a CSS system to support the LF, the force must also be supported while en route. Support required in the embarkation areas may include the operation of camps and mess facilities in staging areas, road maintenance, and equipment maintenance. LF CSS requirements during the movement phase are primarily provided by the ATF, but the LF should plan for administrative and maintenance requirements. CSS requirements during and after rehearsals may be extensive (especially if equipment repairs are necessary) and should be incorporated into the plan.

i. **LF Aviation.** Fixed-wing aviation elements located outside the landing area may require a task organized CSS detachment for support. When LF aviation is phased ashore into the AOA, the CSS requirements (especially engineering and transportation) may be extensive.

5. Health Services Plan

a. The health services plan is usually issued as annex Q (Medical Services) to the AF OPLAN and provides for medical support to all elements of the AF. The LF health services plan will be issued as annex Q (Medical Services) to the LF OPLAN. The CATF and CLF surgeons should develop the medical logistic support plan. See Figure X-1 for LF health services planning considerations.

b. **Planning Responsibilities**

(1) The CATF, in coordination with the CLF:

(a) Establishes patient movement/evacuation policies consistent with JFC, USTRANSCOM, and AF guidance that assigns authority and annotates intratheater and intertheater patient movement requirements and procedures.

(b) Establishes medical support requirements and standards for the civilian population in the operational area, when not prescribed by higher authority.

(2) The CATF surgeon should:

(a) Provide medical support for all embarked personnel between points of embarkation and the AOA.

(b) Provide medical personnel, supplies, and equipment for all units based ashore and not attached to the LF in the AOA.

(c) Develop, in conjunction with the CLF surgeon, patient movement procedures within the landing area.

Health Services Support Planning Considerations

Goal:
Providing for the health of the command and evacuation and hospitalization of sick and wounded.

Planning must consider:

- Overall mission of the force and the supporting medical mission.
- Policies of higher commanders.
- Landing area characteristics.
- Physical, biological, and psychological threats to personnel.
- Lines of communications and evacuation.
- Evacuation policies and procedures.
- Medical supplies required.
- Blood and colloid requirements.
- Casualty estimates.
- Medical personnel available and status of their training.
- Supporting medical facilities and forces outside the objective area.
- Medical needs for civilian population (if authorized) and enemy prisoners of war.
- Need for service medical unit augmentation.
- Requirements for casualty receiving and treatment ships.
- Aircraft and landing craft to provide ambulance facilities.
- Medical augmentation requirements for common-user shipping.
- Other medical facilities available within the objective area.

Figure X-1. Health Services Support Planning Considerations

(d) Establish medical support requirements for the US contractors authorized to accompany the force or civilian population in the AOA when not prescribed by higher authority.

For more information of contractors authorized to accompany the force, see Department of Defense Instruction (DODI) 3020.41, Operational Contract Support (OCS).

(3) The CLF surgeon identifies and coordinates LF health services requirements with the CATF surgeon. Once command is passed ashore, close coordination with the CATF surgeon is still required. The CLF is responsible for preparation of health services plans and should:

(a) Provide for medical support to LF personnel before embarkation.

(b) Provide for medical personnel to assist in the care for LF personnel while embarked.

(c) Execute the patient movement policy established by the GCC for the AOA.

(d) Execute the patient movement plan from the shore to ship in the AOA as directed.

(e) Determine the additional medical requirements of the LF that cannot be met by organic medical LF capabilities.

See JP 4-02, Joint Health Services*, for additional information.*

c. **Patient Movement**

(1) Patient movement policy is a command decision establishing the maximum number of days that patients may be held for treatment. Patients who, in the opinion of responsible medical officers, cannot be returned to a duty status within the prescribed period are evacuated by the first available means, provided the travel involved will not aggravate their condition. The policy will be established for the theater by the CCDR and executed by the CATF in conjunction with the CLF for the AOA. The LFSP controls the flow of casualties from the LFSP evacuation stations and LF medical facilities. The use of any specific patient movement policy for the AOA serves only as a guide for medical planning and should remain flexible to meet the changes in demand placed on the limited medical treatment capability initially available.

(2) Plans for patient movement should be sufficiently detailed and widely disseminated. These plans should include:

(a) Identification of primary casualty receiving and treatment ships (CRTSs) and medical treatment capabilities.

(b) Locations and level of medical treatment facilities ashore.

(c) Communications procedures for patient movement coordination.

(d) Provisions for mass patient movement for situations that may require rapid evacuation of multiple casualties to more distant secondary CRTSs.

(e) Specific provisions that may be required to ensure rapid evacuation of casualties to more distant primary CRTS facilities.

(f) Provisions for contagious or contaminated patients who may require isolation or quarantine measures.

(3) The preferred mode of patient movement is via aircraft. The speed, range, and flexibility of aircraft serve to enhance the medical support capability of the LF. However, patient movement plans should include provisions for maximum use of ground and surface means.

(4) In planning patient movement, the guiding principles include:

(a) Each successive role of care in the health services system has greater treatment capability than the preceding role of care.

(b) During LF operations, patients are moved only as far rearward as the tactical situation dictates and as clinical needs warrant.

(c) ATFs have no dedicated medical lift capability. Movement of patients is based on a lift of opportunity from the sea base to the appropriate role of definitive care.

(d) Coordination of patient movement between roles of care is usually preplanned and coordinated by the medical regulating control officer afloat and the patient evacuation officer ashore.

d. Medical regulating is the actions and coordination necessary to arrange for the movement of patients through the roles of care and to match patients with a medical treatment facility that has the necessary capabilities and available bed space.

(1) The medical regulating plan contains procedures for evacuation of patients to the appropriate role of care, as well as procedures for evacuation of patients outside the AOA.

(2) The medical regulating team provides operational support for patient movement and coordinates seaward casualty evacuation in the AOA and patient evacuation within the afloat units during underway periods. The medical regulating team:

(a) Maintains status information on medical treatment facility status and capabilities within the AOA.

(b) Monitors patient movement activities and provides daily reports/situation reports on matters such as overall and daily patient movement, information on specific patients (as requested), and availability of assets (lifts and beds).

(c) Monitors medical materiel, blood and blood products, and medical personnel replacement requirements.

(d) Advises the CATF surgeon on capabilities and limitations of supporting patient movement operations within the AOA.

(e) Enters patient movement requests using the USTRANSCOM Regulating and Command and Control Evacuation System.

e. **Hospitalization**

(1) Initial hospital support of LF operations is provided initially in CRTSs of the ATF and later by applicable appropriate medical units of the LF when they are established ashore. In most cases, however, the staff and lack of equipment in LF medical units limit

their capabilities of holding patients. Overloading should be avoided to enable current and future operations.

(2) Follow-on hospitalization and treatment support of the LF may be provided by Navy, Army, or Air Force medical units, such as fleet hospitals and hospital ships, expeditionary medical facilities combat support hospitals, or expeditionary medical support units, respectively. These units may or may not be part of the AF.

6. Landing Force Support Party

a. **LFSP.** The LFSP is a temporary LF organization, composed of ATF and LF elements brought into existence by a formal activation order issued by the CLF. For planning purposes, the basic LFSP structure consists of the LFSP commander, the shore party, the beach party, special attachments, and ships' platoons. The LFSP facilitates the ship-to-shore movement and provides initial combat support and CSS to the LF. The CLF organizes a system to accomplish LFSP missions and other specific support functions within the landing area. Other missions of the LFSP are as follows:

(1) Facilitate the landing and movement of personnel, supplies, and equipment across the beach, into an LZ or through a port.

(2) Evacuate casualties and EPWs from the beach. Shipboard detention is only a temporary measure permitted until the detained individual can be transferred to a shore-based facility. It is limited to the minimum period necessary to transfer detainees from a zone of hostilities or as a result of operational necessity.

(3) Beach, retract, and salvage landing ships and craft.

(4) Facilitate the establishment of the LCE, ACE, and naval beach group.

(5) Elements of the LFSP include:

(a) **LFSP Commander.** The designated commander of the LFSP controls landing support operations within the landing area. The LFSP commander provides landing support through close coordination with subordinate units, timely reinforcement, and consolidation of shore party and beach party elements. Initially, LFSP operations are decentralized to the shore party and beach party teams per established code (e.g., Green Beach, Red Beach 1). When the shore party and beach party are established ashore and the shore party commander has consolidated command of the shore party groups, TACON of the shore party and beach party groups transitions to the shore party and beach party commanders, respectively. Concurrent with this transition, the LFSP is established ashore and the LFSP commander assumes TACON of the shore party, beach party, special attachments, and all other LFSP units ashore. If the LFSP is not established ashore concurrently with the beach party and shore party, TACON for landing support operations resides with the shore party commander until the LFSP commander assumes TACON. The LFSP personnel and equipment landed are minimal as the shore party and beach party form the predominant part of the LFSP.

(b) **Shore Party.** The shore party is the LF component of the LFSP. The nucleus for the shore party consists of elements from the LF's logistics element, augmented with personnel and equipment from the GCE, ACE, and other LCE units.

(c) **Beach Party.** The beach party is the Navy component of the LFSP. Personnel and equipment for the beach party come from the naval beach group and elements from a Navy cargo handling battalion, as required by the initiating directive.

(d) **Special Attachments.** Special attachments are made to the LFSP for defense of the BSA, to provide liaison personnel, and for specialized tasks.

(e) **Ships' Platoons.** A ship's platoon consists of assigned LF personnel that load, stow, and off-load LF equipment and supplies. When a ship carries equipment and supplies that belong only to LF units embarked on that ship, the ship's platoon is sourced from the ship's embarked troops.

Detailed information about the LFSP is contained in NTTP 3-02.1M/MCTP 13-10E, Ship-to-Shore Movement.

b. **LFSP Plan**

(1) The CLF and appropriate subordinate commanders prepare LFSP plans containing instructions for the functioning of the LFSP, including the aircraft support team and air mobile support party requirements.

(2) The LFSP plan includes the following:

(a) Organization and mission of the LFSP.

(b) LFSP communications instructions.

(c) Beach, DZ, and LZ defense instructions.

(d) Plan for material staging areas, vehicle lots, fuel supply points, and a trafficking plan.

c. **LFSP Planning Considerations.** In developing the LFSP plans, the following factors should be considered.

(1) Early detailed analysis of the landing area.

(2) Detailed planning for organization of BSAs and LZ support areas.

(3) Adequate communications between tactical units, control elements, and landing support elements.

(4) Composition of the AE and AFOE.

(5) Plans after seizure of the force beachhead line.

(6) Concept of CSS, amounts, and types of supplies and equipment to be landed.

(7) Environmental management requirements.

(8) LF scheme of maneuver and related landing plan.

(9) Enemy disposition in the landing area.

(10) Landing area weather, sea state, terrain, and hydrographic conditions.

(11) Requirements for multiple, separate logistic installations to provide for passive defense against CBRN hazards.

(12) Requirements for beach development and clearance of LZs.

(13) Types of ships (amphibious and commercial), landing craft (displacement or air-cushion), and aircraft to be unloaded.

(14) Availability of personnel and equipment for LFSP operations.

(15) Policy concerning method of handling and disposition of EPWs in accordance with standards of the law of war.

(16) Casualty evacuation and health service regulating policies.

(17) Coordination required with other agencies.

(18) Provision for inter-Service support.

Buildup of beach support area at Inchon, Korea, September 15, 1950.

d. **LFSP Planning Responsibilities**

(1) The CLF is responsible for the timely activation of the LFSP and the conduct of LFSP operations. However, AF elements participate in and contribute to the development of plans for its organization and employment.

(2) The CLF is responsible for the tactical employment and security ashore of all elements of the LFSP and will integrate requirements into the fire support plan.

(3) The CLF determines and presents requirements for support of LFSP operations to the CATF as early as possible in the planning phase.

(4) The CATF prepares related plans that provide facilities and means to ensure effective support of LFSP operations. Examples of such plans are the pontoon causeway and lighterage plan, unloading plan, casualty evacuation plan, and EPW evacuation plan. Integrated training of shore party and beach party elements will be conducted before embarkation begins.

e. **Employment**

(1) The responsibility for embarking and landing the landing support units rests with the supported tactical unit. For this reason, the landing support units are attached to the supported tactical unit for embarkation and landing.

(2) The buildup of the LFSP ashore parallels the tactical buildup ashore.

(3) Landing support operations begin with the landing of the advance parties and continues until the operation is completed or until the parties are relieved. Throughout the operation, the landing support task organization changes as required to meet the situation until the operation is terminated or the LFSP is relieved of its responsibilities. In the initial stages of ship-to-shore movement, the LFSP headquarters is afloat and is typically phased ashore as the operation progresses. A shore party team and beach party team are among the first waves of troops ashore to each colored beach.

For additional information on the organizational structure and changes in C2 for the LFSP and its associated shore party and beach party, see NTTP 3-02.1M/MTWP 13-10E, Ship-to-Shore Movement.

7. Engineer Operations

a. Engineer operations support movement and maneuver at strategic and operational levels and provide infrastructure for force protection. In addition to normal engineer operations (i.e., combat, general, and geospatial), special considerations should be made for MCM and amphibious breaching; joint reception, staging, onward movement, and integration; OPDSs; and amphibious bulk liquid transfer system connectivity. Involvement of the engineer staff is essential in the planning and execution of all phases of amphibious operations.

b. **Engineer Planning.** The nature of engineer support for the LF in amphibious operations ranges from limited combat engineer support for the assault units to general engineer and CSS functions for the LF.

(1) Combat engineers will normally be attached to the assault infantry units to perform a variety of tasks such as engineer reconnaissance; minefield and obstacle emplacement, reduction, and breaching; development of BSAs; LZ site preparation; construction of beach exits; combat trails and roads; and tactical bridging.

(a) Combat engineers can proof lanes on the beach and prepare routes inland from the beach. The combat engineers can also employ mechanical clearing equipment, such as the assault breaching vehicle full width mine plow, flails, and hand-held mine detectors, to clear and expand boat lanes and CLZs to facilitate the logistics flow ashore.

(b) Combat engineers conduct or direct mine and obstacle breaching landward of the line of demarcation for MCM, as well as rapid follow-on clearance efforts on the beach.

(2) General engineers will normally perform vertical and horizontal construction, provision of utilities (including potable water and mobile electric power), installation and operation of bulk fuel systems ashore, maintenance and repair of LOCs, geospatial support, environmental management support, advanced airfield preparation, and bridge construction/maintenance. It is desirable for general engineers to relieve combat engineer elements of responsibilities in rear areas as early as possible.

c. **Naval Construction Force.** The naval construction force is the combined construction units of the Navy, including primarily the mobile construction battalions and the amphibious construction battalions. These units are part of the operating forces and represent the Navy's capability for advanced base construction.

(1) When multiple naval mobile construction battalions (NMCBs) are deployed, an accompanying naval construction regiment should be deployed to serve as the C2 coordinator for the CATF/CLF and assigned naval construction force units.

(2) The NMCB provides construction support to Navy, Marine Corps, and other forces in military operations and conducts protection as required by the circumstances of the deployment situation. The NMCB provides a major deliberate construction capability and is employed to provide facilities that require extensive technical control and construction capability. The NMCB can be employed in expanding or constructing airfield complexes, constructing forward operating bases, repairing or developing ports, constructing major temporary or semi-permanent camps, extensively repairing or rebuilding principal bridges, and installing large-scale utilities systems (i.e., well drilling, water distribution systems). When NMCBs are assigned to the LF, these units will normally be attached to the LCE or CSS element.

(3) The amphibious construction battalion provides designated elements to the CATF, supports the naval beach group during the initial assault and early phases of an

amphibious operation, and assists the landing support element in operations that do not interfere with the amphibious construction battalion's primary mission.

(4) The organization for engineer support is based on the tasks to be accomplished and the priority established for principal tasks. The engineer appendix to the OPLAN or OPORD will include priorities for construction, road and bridge repairs, airfield development, concept of engineer operations, and management of Class IV construction material. Planning considerations include the following:

(a) Capabilities of assigned engineer units.

(b) Requirements for new construction.

(c) Requirements for repair, maintenance, and improvement of facilities such as ports, roads, and airfields.

(d) Transportation and support requirements of engineer support equipment and Class IV construction materials.

(e) Limited beach trafficability of engineer support equipment.

(f) Requirements for the repair, rehabilitation, and operation of existing utilities systems.

(g) Announced priorities for semi-permanent construction.

(h) Requirements for base development as established by higher authority.

Further guidance can be found in JP 3-34, Joint Engineer Operations.

8. Logistics Over-the-Shore and Maritime Pre-Positioning Operations

a. LOTS operations, which include Navy LOTS, Army LOTS, and JLOTS, support off-load of supplies, vehicles, and equipment in amphibious operations following the initial assault. OPDS and the amphibious bulk liquid transfer system may also be included in the operations. The CATF is responsible for debarkation and off-load until termination of the amphibious operation, when the responsibilities for debarkation or off-load are passed to another off-load organization designated by higher authority, such as to the JLOTS commander. The amphibious operation is not normally terminated until the AFOE is ashore. Normally, during transition from ship-to-shore operations to JLOTS operations, there is a period in which the Navy and supported ground forces continue to conduct ship-to-shore movement for initial sustainment using the basic control organization and procedures used for the amphibious operation.

b. In a representative situation, Navy LOTS forces would provide the initial ship unloading capability reinforcing the CATF's existing amphibious cargo discharge organization, thereby maintaining sufficient capability to facilitate the delivery of follow-on supplies and equipment to the AF. Then, as Army transportation units arrive in the area,

they report to their Service component but functionally integrate into the CATF's and the commander MPF's cargo discharge organization. Finally, the JLOTS ship-to-shore C2 organization, when operationally ready and directed by the JTF, will assume responsibility, and the Navy LOTS operation will transition to a JLOTS operation. At this point, control of ship-to-shore assets is transferred from the Navy component commander to the JLOTS organization, and any Navy ship-to-shore assets not already withdrawn will remain under TACON of the JLOTS commander. Ultimately, the JLOTS operation may transition to Army LOTS, using an agreed upon phased-transition procedure.

c. The MPF offers an augmentation capability for amphibious operations, but it is not a substitute due to an inherent lack of forcible entry capability. An MPF operation provides a means to standup and sustain a forward-deployed MAGTF, which can augment an ongoing amphibious operation or another joint, multinational, or combined force operation. When an MPF operation augments an amphibious operation, the MPF mission and appropriate command relationship guidance is included in the initiating and establishing directives.

For additional information, see JP 4-01.6, Joint Logistics Over-the-Shore*, and NTTP 3-02.3/MCTP 13-10D,* Maritime Prepositioning Force Operations.

9. Combat Logistics Force Planning

a. An AF usually does not have an assigned combat logistics force ship attached to the ATF. The AF relies on combat logistics force ships assigned to a particular AOR/numbered fleet. The ships of MSC's combat logistics force are the supply lines to AF at sea. These ships provide virtually everything the AF needs, including fuel, food, ordnance, spare parts, mail, and other supplies. Combat logistics force ships enable the AF to remain at sea, on station, and combat ready for extended periods of time.

b. Regardless of the composition of the AF, the combat logistic force provides the sustainment for all AF operations. The operational endurance and readiness of the AF requires a corresponding and capable combat logistic force system of sustainment that can readily provide food, ammunition, fuel, and spare/repair parts. The JFMCC/Navy component commander continually assesses and adjusts the logistic support system to ensure the correct level and mix of combat logistic force support to match AF sustainment requirements.

c. Unique to the AF is the logistical support provided as the LF moves from the littoral, inland towards the objective. Strategic sealift, prepositioned force assets, and other prepositioned material will be used in support of the LF ashore.

10. Landing Force Logistics Planning

a. The types and quantities of supplies taken into the AOA directly affect the requirement for air and surface transportation. For ease of control and planning for an amphibious operation, requirements for supply support are stated under two major categories—LF initial supplies and sustainment.

b. **Determination of Requirements.** Overall requirements for supply support of the LF indicate the total tonnage to be moved into the AOA or operational area during a given period. Based on the statement of overall requirements for supply support, general requirements for the logistic support of the LF, including requirements for amphibious warfare ships and AFOE shipping and aerial resupply, are reported to higher authority.

(1) **DOS.** The first step in estimating overall requirements for supply support is to determine the DOS. The DOS is based on standard Service planning factors and logistics planning factors for the operation. In calculating the DOS, the requirements for each separate class of supply are considered.

(2) **Stockage Objective.** The second step is to calculate the stockage objective for each class of supply. In operations of limited scope, limiting the stockage objective to 30 DOS may be desirable. However, even the limited objective may not be reached until the latter stages of the assault.

(3) **Factors Influencing Stockage Objective.** The amounts and types of supplies carried in the amphibious warfare ships and AFOE shipping must be compatible with the shipping space available and must meet the minimum requirements for support of the LF until termination of the amphibious operation. Before the stockage objective can be finally determined, the following factors should be considered:

(a) Enemy capabilities.

(b) Availability of fixed-wing cargo aircraft.

(c) Availability of shipping and distances involved.

(d) Availability of ports and airfields.

(4) **LF operational reserve material/mission load allowance** is a package of contingency supplies pre-positioned in amphibious warfare ships to reduce loading time in contingencies. The LF operational reserve material package comprises Classes I (packaged operational rations), III(A) and III(W) (petroleum, oils, and lubricants), IV (field fortification material), and V(A) and V(W) (ammunition). However, other selected items can be included to support specific deployments and contingency operations at the discretion of the CLF.

c. **The Plan for Landing Supplies.** In coordination with the CATF, the CLF develops plans for selective unloading of supplies in the objective area. The CATF allocates landing ships and craft required to carry supplies from ship to shore and to establish floating dumps. Together, in the plan for landing supplies, the CATF and CLF plan the ship-to-shore movement of supplies and equipment so that it is responsive to LF requirements. TACLOG groups are established to ensure responsiveness is achieved. In developing the plan for landing supplies, the following factors are considered:

(1) Types and amounts of supplies to be carried ashore by LF units as prescribed loads.

(2) Types and amounts of supplies to be established in floating dumps and pre-staged helicopter-lifted supplies and on-call supply packages for potential surge requests.

(3) Levels of supply to be established ashore.

(4) Techniques that ensure the orderly, rapid buildup of supply levels ashore, such as:

(a) Use of landing craft and vehicles carrying assault troops to ferry designated types and amounts of supplies ashore on each trip.

(b) Provision for the mobile loading of each vehicle of the LF not involved in the lift of the assault elements ashore.

(c) Means for facilitating the transfer of supplies from ship to shore, including the most efficient use of such items as pallets, containers, cargo nets, and slings.

d. **Supply Operations Ashore.** During the early stages of the attack, the ATF ships are the primary supply source for the LF. Prior to the establishment of landing support ashore, critical supplies are furnished directly to the requesting unit by the LCE or CSS element, through the TACLOG group, from amphibious warfare ships. Subsequent to the establishment of landing support units ashore, combat elements are supplied through shore-based CSS facilities. As the operation progresses, several supply installations may be established within the beachhead by other CSS units of the LF. When adequate supply levels have been achieved in installations ashore and transportation means are available, supply support of LF units will be provided from these areas. Supply sources may be augmented by the aerial delivery of supplies by fixed-wing aircraft operating from bases outside the landing area. The ships of the ATF continue as the primary source of immediate resupply for the LF.

(1) **Supply control and distribution** are accomplished at both the LF level and at the lowest levels that have an organic supply capability (e.g., battalion). These levels are most important within the overall function of supply, especially during the critical transition from sea-based to shore-based supply support during an amphibious operation. Adherence to the following principles during the transitional and ashore stages of the operation will result in a control and distribution system that is reliable, flexible, and responsive.

(a) **Supply Control.** The flow of supply should be direct from source to consumer; supplies should be handled as infrequently as possible.

(b) **Distribution System.** The distribution system may provide either supply point distribution, wherein the unit draws supplies from a central location, or unit distribution, wherein the supplying agency delivers supplies to the unit. During the initial stages of the amphibious assault, unit distribution is normally required and is effected through the organization for landing support in conjunction with the TACLOG group and consists of delivery of pre-positioned emergency supplies. During later stages of the

operation, as additional CSS units phase ashore and supplies are built up, supply point distribution may be employed.

(2) **Salvage** is the term applied to materiel that has become unserviceable, lost, abandoned, or discarded but which is recoverable. It includes captured enemy equipment. Unit commanders at all levels are responsible for salvage collection and evacuation within their respective unit areas. Designated salvage organizations receive and process salvage received from combat units.

11. Landing Force Maintenance Planning

a. Maintenance operations support the administrative and functional needs of the LF units at the organizational (unit) and intermediate levels. LF commanders, the senior CSS unit commander, and the LF logistics staff officer and staff share responsibilities for maintenance planning.

b. **Planning Considerations.** The LF maintenance plan should be based on an assumption that initial capabilities in the AOA/AO, especially once ashore, will be limited. The maintenance plan should provide for:

(1) Clearly defined maintenance capabilities and responsibilities during each phase of the operation.

(2) Early landing of maintenance personnel and critical repair parts.

(3) Simple and responsive maintenance request procedures, including use of floating dumps if applicable.

(4) Decentralized execution of maintenance action through contact teams and mobile repair facilities.

(5) Executing repairs as rapidly and as close to the using unit as possible.

(6) Coordinated employment of maintenance support with other CSS functions.

(7) Provisions for battlefield salvage of large combat systems or vehicles via maintenance channels and location of salvage points/yards and cannibalization lots.

(8) Maintenance for ground vehicles and weapons to include maintenance contact points and other planning factors.

c. **Planning Requirements.** All LF units should determine their maintenance requirements and compare them against their organic (unit-level) capabilities. Shortfalls should be identified during the planning process and forwarded to higher and supporting unit commands. An estimate of maintenance requirements includes an in-depth examination of each of the following:

(1) Available personnel; required skills and quantity.

(2) Repair parts; consumables and secondary repairable items.

(3) Tools and equipment; by type, quantity, and location.

(4) Facilities support requirements during embarkation, movement, rehearsal, and action (including BSAs and CSSAs).

(5) Procedures to request and report data requirements, routing, distribution, and means of transmission.

(6) Transportation requirements for equipment recovery and salvage, contact teams, and distribution of repair parts and materials.

(7) External maintenance units or agencies available for support.

(8) Liaison with other subordinate CSS units.

12. Landing Force Transportation Planning

a. Transportation consists of movement of personnel, supplies, and equipment by water, air, or surface means. Transportation requirements are based on two factors: the character of the operation and the types and quantities of supplies required in the objective area. Transportation tasks may include unloading and transfer of supplies ashore, forwarding of LF supplies and materials from the landing site(s), and operating the land transportation system (e.g., marking of routes, convoy control) within the AO.

b. **Transportation Requirements**

(1) Transportation requirements are normally stated in tons of supplies and equipment, gallons of fuel, or number of personnel to be moved during a particular period. The estimated distances of these movements will also play a key role in the planning estimate. Particular consideration should be given to the supply of aviation fuel. Although initiating air operations ashore through the use of packaged fuel is possible, continuing supply of aviation fuel requires the installation of bulk fuel systems and a high-capacity mobile liquid fuel transport capability ashore as soon as possible.

(2) Detailed requirements state the specific numbers, types, and capacities of vehicles, bulk fuel facilities, and aircraft required at specific times and places. They also state the schedules of operation and routes to be traversed.

(3) The demarcation line between ATF and LF responsibilities for bulk petroleum, oils, and lubricants supply is normally the high water mark. Delivering and transporting fuel to internal storage distribution areas is an LF responsibility.

c. **Planning Considerations.** Transportation planning is influenced by:

(1) The adequacy of the LOCs in the landing area (roads, rail, and waterway).

(2) The extent of degradation of LOCs by weather, enemy action, and use.

(3) The requirements for handling bulk fuel and water.

(4) The availability of helicopters for transportation.

d. **Transportation in the AO**

(1) The CLF, in coordination with the CATF, develops plans to sustain LF operations ashore.

(2) The CLF establishes priorities for movement and ensures adequate movement and traffic control within the LF operational area, optimizing the use of assets and facilities.

(3) The LF CSS plan makes provision for:

(a) Transportation assets scheduled for landing during the initial landing and unloading period.

(b) Combat loads prescribed for each vehicle prior to landing and once ashore.

(c) Attachment of transportation units to combat, combat support, or CSS units of the LF.

(d) LF traffic control measures employed ashore.

APPENDIX A
ASSAULT FOLLOW-ON ECHELON

1. General

a. The AFOE is not to be confused with Marine Corps forces deployed by MPF. When an ATF is being formed by the supported CCDR, USTRANSCOM allocates cargo space for the AFOE mission to the supported CCDR. Ships are then integrated into the Navy component commander's operations and incorporated with the forces of the CATF. Sealift assets are positioned and loaded at port facilities, generally where ATF support cargo and personnel can be most expeditiously and efficiently loaded to meet AFOE mission requirements. Loadout of AFOE shipping is nearly simultaneous with the loadout of AE shipping. The AFOE deploys in accordance with the CATF's amphibious OPLAN. The ships supporting the AFOE should be loaded with off-load priorities to support the LF scheme of maneuver ashore. The AFOE loads need to be discharged swiftly to support the LF.

b. When supporting ships are loaded and ready for sea, they will become TACON to the CATF or the designated subordinate if the ship is to sail as a unit of a Navy formation or movement group. Because of the tactical employment inherent in amphibious operations, the CATF will have OPCON of the strategic sealift assigned. The AFOE is normally required in the AOA or operational area early enough to commence off-load no later than five days after the commencement of the assault. The AFOE will consist of additional merchant shipping and support personnel and equipment to handle the added ship-to-shore movement. This will require ships carrying off-load systems to be off-loaded as soon as possible (as early as D+1) depending on the scope of the amphibious operation and size of the MAGTF. For example, a single MEB's AFOE off-load should commence no later than D+5 to support the arrival of its fly-in personnel and unit equipment by D+9 with the goal of all supplies being ashore by D+15. Off-loading of the AFOE is accomplished by the normal USN/USMC ship-to-shore movement control and support organizations (e.g., PCO, TACLOG, LFSP). These organizations will undergo changes in composition as the operation matures and the logistics element establishes capabilities ashore. Upon release of the ships from tasking in the AOA or AO, the CATF will transfer TACON of the ship back to MSC.

c. Should an MPF reinforce the amphibious operation and an in-stream off-load be required, the MPSRON off-load is integrated into the overall ATF ship-to-shore movement control structure. The expeditionary transfer dock (ESD) serves as a mobile sea-base option that provides access infrastructure supporting the flexible deployment of forces and supplies. MPF lighterage may be used to support the AFOE off-load, or surface connectors (LCACs, LCUs) may be used in conjunction with ESDs. If the MPF off-load is separated by space and time from the AE landing and/or conducted in-port, stand-alone MPF arrival and assembly task-organized structure (arrival and assembly operations group, POG, BOG, and the AACG) will be used for the independent off-load.

d. An AFOE off-load to support the establishment of a theater airfield outside of the AOA or operational area could take place as a separate operation requiring a separate off-load organization.

For more information, see JP 4-01.2, Sealift Support to Joint Operations*, and MCTP 13-10M,* Amphibious Embarkation.

2. Organization and Responsibilities

a. The CATF and CLF are responsible for the AFOE debarkation and off-load, and the amphibious operation does not normally terminate until the AFOE is ashore.

b. As the first elements of the AFOE approach the AOA or operational area, the CATF should already have a well-defined ship-to-shore movement organization in place. The CATF continues to maintain overall control of ship-to-shore movement during AFOE operations.

(1) The role of the PCO will expand to include control of assigned AFOE shipping. Additional Navy support element personnel will be required to assist the PCO in performing these expanded duties. Additional Navy cargo-handling battalions and NMCB forces are required to support the off-load of strategic lift merchant ships.

(2) During extended joint operations, a transition from amphibious operations to Navy LOTS could proceed further transition to JLOTS operation, which may be directed by the JFC.

(3) As they become accessible, developed seaports and aerial ports are used to supplement traditional beach operations and the normal ship-to-shore organization will be expanded to include them.

c. The CATF administers afloat forces within the AOA or AO through the use of sea areas to deconflict operations of the various components of the ATF and supporting units and platforms. In general, AFOE ships would be assigned to the sea echelon area for holding purposes prior to introduction into the transport areas. The CATF may designate sea echelon and transport area commanders, as required, to facilitate C2 of shipping assigned to those areas.

d. As off-load of the AE is normally already completed, the CLF should have in place a well-established BSA and a TACLOG, which will continue to assist and advise the CATF's ship-to-shore movement and control agencies. The CLF continues to support off-loading of AFOE strategic shipping and airlift and changes landing support organizations employed during the debarkation of the AE, as required, and as the tactical situation permits. The CLF organizes the beachhead to facilitate the off-loading and the CSS buildup ashore and to accommodate the off-load and movement of any containerized cargo. Throughout the AFOE off-load, the CLF maintains off-load control agencies, provides USMC personnel to perform stevedore functions to assist in the off-load of merchant ships, and provides vehicle and equipment operators for the off-load of embarked LF equipment and material. The CLF does this through the following organizations:

(1) The LFSP is a temporary task organization composed of Navy and LF elements that operate the BSA(s). The LFSP, the nucleus provided by a combat logistics regiment or direct support combat logistics battalion, supports the LF during the ship-to-

shore movement and assists in the execution of the landing plan by providing a uniform flow of materiel to units ashore. During the off-load of the AFOE, the LFSP remains intact as a task-organized element and performs those same functions provided the AE; however, as the situation changes, the LFSP will decrease in size and form the nucleus of the BOG which will continue to provide landing support functions until off-load operations are completed or terminated. As the situation changes, the CLF will change the size of the LFSP required to handle throughput of the AFOE off-load.

(2) During off-load of the AFOE, the TACLOG will provide the necessary support to ensure the AFOE off-load is responsive to LF requirements. When permitted by the tactical situation, the CLF may recommend to the CATF that general unloading begin. General unloading is normally expected to begin at about D+9 for a MEB landing. When the order for general unloading is given, the TACLOG will cease active operation but remain substantially intact, prepared to resume selective unloading should the tactical situation ashore require.

(3) The BSA is the first CSS installation established ashore to support the amphibious operation and it will continue to function as the initial throughput point in support of AFOE off-load. To support initial off-load of containerized cargo, the LFSP/BOG supports the container off-load, either across the beach by causeway ferries and landing craft or over elevated causeways.

(4) The BOG originates from elements of the LFSP that are augmented with terminal operations, beach and port, supply, engineer, motor transport, communications, and military police personnel. The BOG is the CLF's principle coordinating agency providing C2 of throughput of AFOE equipment and supplies. The BOG will develop the beach to support AFOE off-load and movement inland or to overflow areas.

(5) Should a seaport be available for use, the LF will establish a POG to prepare the port prior to arrival of AFOE shipping and throughput of supplies and equipment of the AFOE.

(6) Concurrently, the LF will establish an AACG to coordinate the reception of fly-in AFOE personnel, supplies, and equipment.

3. Planning and Execution Considerations

a. When a ship has been directed to off-load, it will move to the inner transport area and report to an inner transport commander, if assigned. The ship-to-shore movement organization, normally headed by the PCO, will monitor the conduct of the off-load of ships. In instances when the AOA has been disestablished prior to completion of the AFOE off-load, the functions of the PCO will be performed by a designated off-load coordinator. As each ship arrives at its position for off-load, a debarkation team will embark consisting of those personnel who will conduct the off-load of a particular ship. In addition to C2 personnel, this team will provide USMC personnel to perform stevedore functions, as well as Navy personnel to support the operation of the ship off-load systems.

b. The conduct and sequencing of the off-load is constrained by the availability of off-load systems. At anchorage, self-sustaining ships will be constrained by anchorage locations and lighterage availability. Non-self-sustaining ships will be further constrained by the availability of auxiliary crane ships to support the off-load. At the beach, cargo movement from both self-sustaining and non-self-sustaining ships will be constrained by the number and availability of beach off-load points. Key principles include:

(1) First priority should always be given to off-loading the lighterage to support the AFOE off-load. If a MPF or MPSRON is supporting the operation, lighterage may be available for use from the MPSs. Other heavy lift ships may bring lighterage from the naval beach groups or from the Army.

(2) The lead time required for the installation of the elevated causeway necessitates priority off-load of these components and delivery to the beach to begin installation.

(3) The auxiliary crane ship will normally be given priority for assignment to off-load anchorage. It will then be in position to receive non-self-sustaining ships alongside.

(4) If no pier facilities are available, RO/RO ships will normally be off-loaded using a RO/RO discharge facility. Consideration should be given to aligning the RO/RO anchorage with compatible beach off-load sites for assigned lighters (causeways preferred, LCUs second) to maximize off-load.

(5) If the tactical situation ashore does not permit immediate off-load, the aviation logistic support ship may be employed as a sea-based maintenance facility with limited intermediate level maintenance capability.

(6) LF fuel requirements and lead time for preparation of installations ashore to accept bulk fuel delivery may necessitate early assignment of anchorage and support craft for an OPDS ship. The nature of fuel operations and the inland fuel distribution system will normally drive selection of the location for the OPDS anchorage.

(7) Calm sea conditions or protected waterways are preferred for discharge of lighter aboard ships and handling of small craft and barges. Extensive barge marshaling areas may be required within protected waters.

c. When a merchant ship has completed its off-load, the ship will change TACON back to MSC and return to the common user pool. Containerships should not loiter in the AOA or operational area to retrograde containers.

d. Intertheater airlift could deploy AFOE forces and equipment directly to suitable airfields in, or near, the AOA or operational area. Intratheater airlift could also be used to transport AFOE forces from ISBs to airfields in closer proximity to the beachhead.

e. Generally, the AE off-load is responsive to changes in requirements for materiel and supplies ashore. In contrast, the objective of AFOE material is to maximize

throughput. However, sufficient flexibility should be maintained to quickly divert from the planned off-load priorities to respond to emerging operational requirements ashore.

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APPENDIX B
COMPOSITE WARFARE DOCTRINE

1. Introduction

a. **The Navy uses the CWC to defend the ATF at sea.** There may be multiple CWCs assigned to support the JFC's operation. Each CWC focuses on its own surveillance and classification, identification, and engagement areas.

b. The CWC enables the OTC to aggressively wage offensive combat operations against air, surface, and subsurface threats while carrying out the primary missions of the force and to shape the operational environment for the amphibious operation. Although assignment of various warfare commanders will enable control of different capabilities in a single platform by multiple commanders, only one commander may exercise TACON for the ship's movements and maneuver. The use of a CWC can apply to any naval task force or task group operating at sea and is capable of flexible implementation and application.

2. Relationship of the Officer in Tactical Command-Composite Warfare Commander to Commander, Amphibious Task Force

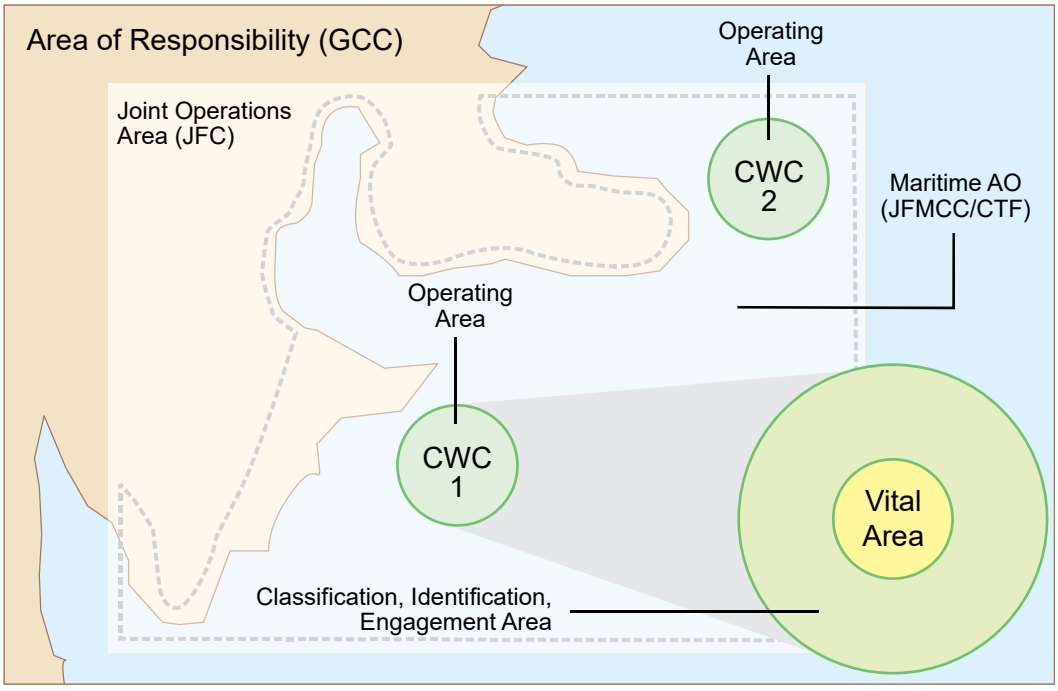
a. Except for limited self-defense capabilities, amphibious warfare ships are ill-suited to counter a sophisticated air, surface, and subsurface threat by their own means. For this reason, the ATF may require assigned screening assets both during the movement phase and while conducting operations in the AOA or AO. In a similar manner, depending on the type and scope of the amphibious operation, a support relationship between an AF, a CSG, and other joint forces may be necessary for the conduct of shaping operations to set the conditions (maritime and air superiority) to commence the amphibious operation, particularly in a contested environment.

b. The integration of CWC doctrine with amphibious doctrine is difficult due to the wide variety of tactical situations that may be encountered. Coordination among the organizations early in the planning is critical and should lead to a draft support relationship that could be recommended for inclusion in an establishing directive promulgated by the establishing authority. Consideration should be given to the following factors:

(1) Under all circumstances, upon activation of the AOA or AO, unity of effort within the AOA or operational area should be maintained to ensure the CATF and CLF retain that degree of authority necessary to ensure success of the operation. This will normally dictate that **the CATF is the CWC within the AOA or AO and receive or provide support from or to a designated CWC outside the AOA or AO** as shown in Figure B-1.

(2) As the operation progresses, **transition from one CWC relationship to another is possible** and may, in fact, be required to optimize the protection and employment of forces in the most efficient manner as the tactical situation evolves.

Composite Warfare Commander Integration Within the Operational Area



Legend

AO	area of operations	GCC	geographic combatant commander
CTF	commander, task force	JFC	joint force commander
CWC	composite warfare commander	JFMCC	joint force maritime component commander

Figure B-1. Composite Warfare Commander Integration Within the Operational Area

(3) A CSG may be assigned the single mission of providing direct support to the AF, but more likely, the CSG will be assigned multiple missions in support of the larger joint operation which will significantly affect command and support relationships and coordination requirements. A mechanism must, therefore, exist to **adjudicate conflicting requirements for the use of maritime assets between the JFMCC and the JFC.**

(4) The LF capabilities that may be leveraged to support the CATF and the naval force to ensure the AF is protected and the LF objectives can be met.

For more information on defending the ATF, refer to NWP 3-02.1.4M/MCTP 13.10G, Defense of the Amphibious Task Force.

c. With the above factors in mind, the following is a description of three situations that may exist, requiring different constructs for the association between the amphibious and other forces. These can be tailored, as desired, to the specific requirements of the mission.

(1) **The support force is to join and integrate with the ATF.** The CATF becomes the OTC and CWC of the combined force unless otherwise directed by establishing authority. All forces are integrated under a single OTC-CWC and set of warfare commanders. This situation is most applicable to the movement phase.

(2) **The support force does not join but provides support as designated by establishing authority.** The CATF coordinates the tactical operations of all assigned and supporting forces. The supporting commander is authorized to answer directly to the supported force's requests for assistance and may establish a CWC to provide the support. This situation also applies during the movement phase and action phase. The individual CSG or task group should remain intact.

(3) **Each force has its own OTC-CWC and warfare commanders.** Force (ATF, CSG) integrity is maintained. The OTC-CWCs operate in mutual support to achieve the same broad mission objectives, but each has discretion as to how best to support the other. This relationship is most applicable when the forces have multiple joint force requirements beyond the amphibious operation.

d. TACON of amphibious warfare ships is controlled by the movement group commander during transit. While conducting ship-to-shore operations, TACON of amphibious warfare ships is exercised through the CCO or PCO and TACON of NSFS ships is exercised through the SAC. Planners and operators should make the distinction between CATF and CWC duties, especially when the CATF is not the CWC.

For further details on the CWC, see JP 3-32, Command and Control of Joint Maritime Operations*; NWP 3-56,* Composite Warfare: Maritime Operations at the Tactical Level of War*; and NWP 3-02.1.4M/MCTP 13-10G,* Defense of the Amphibious Task Force.

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APPENDIX C
POINTS OF CONTACT

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APPENDIX D
REFERENCES

1. Department of Defense Publications

DODI 3020.41, *Operational Contract Support (OCS).*

2. Chairman of the Joint Chiefs of Staff Publications

a. CJCSM 3500.04F, *Universal Joint Task Manual.*

b. CJCSM 6231.01E, *Manual for Employing Joint Tactical Communications*.

c. JP 1, *Doctrine for the Armed Forces of the United States.*

d. JP 1-04, *Legal Support to Military Operations.*

e. JP 2-0, *Joint Intelligence.*

f. JP 2-01, *Joint and National Intelligence Support to Military Operations.*

g. JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment.*

h. JP 2-03, *Geospatial Intelligence in Joint Operations.*

i. JP 3-0, *Joint Operations.*

j. JP 3-01, *Countering Air and Missile Threats.*

k. JP 3-04, *Joint Shipboard Helicopter and Tiltrotor Aircraft Operations.*

l. JP 3-05, *Special Operations.*

m. JP 3-07, *Stability*.

n. JP 3-07.3, *Peace Operations.*

o. JP 3-09, *Joint Fire Support.*

p. JP 3-09.3, *Close Air Support.*

q. JP 3-11, *Operations in Chemical, Biological, Radiological, and Nuclear Environments.*

r. JP 3-12, *Cyberspace Operations*.

s. JP 3-13.3, *Operations Security*.

t. JP 3-13.4, *Military Deception.*

u. JP 3-15, *Barriers, Obstacles, and Mine Warfare for Joint Operations.*

v. JP 3-16, *Multinational Operations.*

w. JP 3-18, *Joint Forcible Entry Operations.*

x. JP 3-30, *Command and Control of Joint Air Operations.*

y. JP 3-31, *Command and Control for Joint Land Operations.*

z. JP 3-32, *Command and Control of Joint Maritime Operations.*

aa. JP 3-33, *Joint Task Force Headquarters.*

bb. JP 3-34, *Joint Engineer Operations.*

cc. JP 3-50, *Personnel Recovery.*

dd. JP 3-52, *Joint Airspace Control.*

ee. JP 3-57, *Civil-Military Operations.*

ff. JP 3-60, *Joint Targeting.*

gg. JP 4-0, *Joint Logistics.*

hh. JP 4-01.2, *Sealift Support to Joint Operations.*

ii. JP 4-01.6, *Joint Logistics Over-the-Shore.*

jj. JP 4-02, *Joint Health Services*.

kk. JP 5-0, *Joint Planning*.

ll. JP 6-0, *Joint Communications System.*

mm. JP 6-01, *Joint Electromagnetic Spectrum Management Operations.*

3. Service Publications

a. Army Doctrine Publication 3-0, *Operations.*

b. Marine Corps Doctrine Publication 1, *Warfighting*.

c. Marine Corps Doctrine Publication 6, *Command and Control.*

d. MCTP 3-10C, *Employment of Amphibious Assault Vehicles (AAVs).*

e. MCTP 3-20D, *Offensive Air Support.*

f. MCTP 13-10M, *Amphibious Embarkation.*

g. MCRP 3-20F.8, *Low Altitude Air Defense Handbook.*

h. MCRP 3-30.1, *Raid Operations.*

i. MCWP 5-10, *Marine Corps Planning Process*.

j. NTTP 3-02.1.3, *Amphibious/Expeditionary Operations Air Control.*

k. NTTP 3-02.14, *Naval Beach Group Operations.*

l. NTTP 3-20.31, *Surface Ship Survivability.*

m. NTTP 3-21.1, *Antisubmarine Warfare Commander's Manual.*

n. NWP 3-02.21, *MSC Support of Amphibious Operations.*

o. NWP 3-09, *Navy Fire Support.*

p. NWP 3-20, *Navy Surface Warfare Manual.*

q. NWP 3-29, *Disaster Response Operations.*

r. NWP 3-56, *Composite Warfare; Maritime Operations at the Tactical Level of War.*

s. NWP 5-01, *Navy Planning.*

4. Multi-Service Publications

a. ATP 3-90.4/MCTP-34A, *Combined Arms Mobility Operations.*

b. ATP 5-0.3/MCRP 5-10.1/NTTP 5-01.3/AFTTP 3-2.87, *Multi-Service Tactics, Techniques, and Procedures for Operation Assessment.*

c. Naval Doctrine Publication 1, *Naval Warfare.*

d. NTTP 3-02.1M/MCTP 13-10E, *Ship-to-Shore Movement.*

e. NTTP 3-02.2/MCTP 3-31A, *Supporting Arms Coordination in Amphibious Operations.*

f. NTTP 3-02.3M/MCTP 13-10D, *Maritime Prepositioning Force Operations.*

g. NTTP 3-13.3M/MCTP 3-32B, *Operations Security (OPSEC).*

h. NTTP 3-15.24/MCRP 13-10J.1, *Mine Countermeasures in Support of Amphibious Operations.*

i. NTTP 3-51.1, *Navy Electronic Warfare.*

j. NWP 3-02.1.4M/MCTP 13-10G, *Defense of the Amphibious Task Force.*

k. NWP 3-02.12M/MCTP 13-10A, *Employment of the Landing Craft Air Cushion (LCAC).*

l. NWP 3-15 (Vols. I and II)/MCTP 13-10J, *Naval Mine Warfare.*

m. NWP 3-62M/MCWP 13-10, *Seabasing*.

5. Multinational Publication

a. Allied Procedural Publication-11, *NATO Message Catalogue.*

b. Allied Tactical Publication-08, Vol 1, *Doctrine for Amphibious Operations.*

c. Allied Tactical Publication-08 Vol II, *Tactics Techniques and Procedures for Amphibious Operations.*

APPENDIX E
ADMINISTRATIVE INSTRUCTIONS

1. User Comments

Users in the field are highly encouraged to submit comments on this publication using the Joint Doctrine Feedback Form located at: https://jdeis.js.mil/jdeis/jel/jp_feedback_form.pdf and e-mail it to: js.pentagon.j7.mbx.jedd-support@mail.mil. These comments should address content (accuracy, usefulness, consistency, and organization), writing, and appearance.

2. Authorship

a. The lead agent for this publication is the US Navy. The Joint Staff doctrine sponsor for this publication is the Director for Operations (J-3).

b. The following staff, in conjunction with the joint doctrine development community, made a valuable contribution to the revision of this joint publication: lead agent, Mr. Dave MacEslin, Navy Warfare Development Command; Joint Staff doctrine sponsor, Mr. Glenn Lawless, Joint Staff J-3; LCDR Omari Buckley, Joint Staff J-7, Joint Doctrine Analysis Division; and LCDR Adam Yates, Joint Staff J-7, Joint Doctrine Division.

3. Supersession

This publication supersedes JP 3-02, *Amphibious Operations,* 18 July 2014.

4. Change Recommendations

a. To provide recommendations for urgent and/or routine changes to this publication, please complete the Joint Doctrine Feedback Form located at: https://jdeis.js.mil/jdeis/jel/jp_feedback_form.pdf and e-mail it to: js.pentagon.j7.mbx.jeddsupport@mail.mil.

b. When a Joint Staff directorate submits a proposal to the CJCS that would change source document information reflected in this publication, that directorate will include a proposed change to this publication as an enclosure to its proposal. The Services and other organizations are requested to notify the Joint Staff J-7 when changes to source documents reflected in this publication are initiated.

5. Lessons Learned

The Joint Lessons Learned Program (JLLP) primary objective is to enhance joint force readiness and effectiveness by contributing to improvements in doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy. The Joint Lessons Learned Information System (JLLIS) is the DOD system of record for lessons learned and facilitates the collection, tracking, management, sharing, collaborative resolution, and dissemination of lessons learned to improve the development and readiness of the joint force. The JLLP integrates with joint doctrine through the joint doctrine development process by providing lessons and lessons learned derived from operations,

events, and exercises. As these inputs are incorporated into joint doctrine, they become institutionalized for future use, a major goal of the JLLP. Lessons and lessons learned are routinely sought and incorporated into draft JPs throughout formal staffing of the development process. The JLLIS Website can be found at https://www.jllis.mil (NIPRNET) or http://www.jllis.smil.mil (SIPRNET).

6. Distribution of Publications

Local reproduction is authorized, and access to unclassified publications is unrestricted. However, access to and reproduction authorization for classified JPs must be IAW DOD Manual 5200.01, Volume 1, *DOD Information Security Program: Overview, Classification, and Declassification,* and DOD Manual 5200.01, Volume 3, *DOD Information Security Program: Protection of Classified Information.*

7. Distribution of Electronic Publications

a. Joint Staff J-7 will not print copies of JPs for distribution. Electronic versions are available on JDEIS Joint Electronic Library Plus (JEL+) at https://jdeis.js.mil/jdeis/index.jsp (NIPRNET) and https://jdeis.js.smil.mil/jdeis/generic.jsp (SIPRNET), and on the JEL at http://www.jcs.mil/Doctrine (NIPRNET).

b. Only approved JPs are releasable outside the combatant commands, Services, and Joint Staff. Defense attachés may request classified JPs by sending written requests to Defense Intelligence Agency (DIA)/IE-3, 200 MacDill Blvd., Joint Base Anacostia-Bolling, Washington, DC 20340-5100.

c. JEL CD-ROM. Upon request of a joint doctrine development community member, the Joint Staff J-7 will produce and deliver one CD-ROM with current JPs. This JEL CD-ROM will be updated not less than semi-annually and when received can be locally reproduced for use within the combatant commands, Services, and combat support agencies.

GLOSSARY
PART I—ABBREVIATIONS, ACRONYMS, AND INITIALISMS

AACG	arrival airfield control group
AADC	area air defense commander
AATCC	amphibious air traffic control center
AAV	amphibious assault vehicle
ACA	airspace control authority
ACE	aviation combat element (USMC)
ACM	airspace coordinating measure
ACO	airspace control order
ACP	airspace control plan
ADCS	air defense coordination section
ADZ	amphibious defense zone
AE	assault echelon
AF	amphibious force
AFOE	assault follow-on echelon
AFTTP	Air Force tactics, techniques, and procedures
AMC	Air Mobility Command
AMDC	air and missile defense commander
AO	area of operations
AOA	amphibious objective area
AOR	area of responsibility
APF	afloat pre-positioning force
APS	Army pre-positioned stocks
ARG	amphibious ready group
ASCS	air support control section
ASLT	assault support landing table
ASW	antisubmarine warfare
ATCS	air traffic control section
ATF	amphibious task force
ATO	air tasking order
ATP	Army techniques publication
BLT	battalion landing team
BOG	beach operations group
BSA	beach support area
C2	command and control
CAS	close air support
CATF	commander, amphibious task force
CBRN	chemical, biological, radiological, and nuclear
CCDR	combatant commander
CCO	central control officer
CDRUSTRANSCOM	Commander, United States Transportation Command

CE	command element (USMC)
CJCSM	Chairman of the Joint Chiefs of Staff manual
CLA	landing craft, air cushion launch area
CLF	commander, landing force
CLZ	landing craft, air cushion landing zone
COA	course of action
COG	center of gravity
COMSEC	communications security
CONOPS	concept of operations
CRTS	casualty receiving and treatment ship
CSG	carrier strike group
CSS	combat service support
CSSA	combat service support area
CWC	composite warfare commander
DASC	direct air support center
DOD	Department of Defense
DODI	Department of Defense instruction
DOS	days of supply
DZ	drop zone
EA	electronic attack
EMCON	emission control
EMS	electromagnetic spectrum
EPW	enemy prisoner of war
ESD	expeditionary transfer dock
ESG	expeditionary strike group
EW	electronic warfare
FARP	forward arming and refueling point
FDC	fire direction center
FDO	foreign disclosure officer
FEC	fires and effects coordinator
FFC	force fires coordinator
FFCC	force fires coordination center (USMC)
FHA	foreign humanitarian assistance
FSA	fire support area
FSCC	fire support coordination center (USMC)
FSCM	fire support coordination measure
FSCOORD	fire support coordinator (USA)
G-6	assistant chief of staff, communications/communications system staff section (USMC)
GCC	geographic combatant commander
GCE	ground combat element (USMC)

HIDACZ	high-density airspace control zone
INLS	improved Navy lighterage system
IPE	individual protective equipment
ISB	intermediate staging base
JEMSO	joint electromagnetic spectrum operations
JFACC	joint force air component commander
JFC	joint force commander
JFLCC	joint force land component commander
JFMCC	joint force maritime component commander
JIPOE	joint intelligence preparation of the operational environment
JLOTS	joint logistics over-the-shore
JOA	joint operations area
JOPES	Joint Operation Planning and Execution System
JP	joint publication
JTF	joint task force
LCAC	landing craft, air cushion
LCE	logistics combat element (USMC)
LCU	landing craft, utility
LF	landing force
LFOC	landing force operations center
LFSP	landing force support party
LHA	amphibious assault ship (general purpose)
LHD	amphibious assault ship (multipurpose)
LNO	liaison officer
LOC	line of communications
LOD	line of departure
LOTS	logistics over-the-shore
LPD	amphibious transport dock
LSD	dock landing ship
LSV	logistics support vessel
LZ	landing zone
MAGTF	Marine air-ground task force
Marine TACC	Marine Corps tactical air command center
MCM	mine countermeasures
MCMC	mine countermeasures commander
MCRP	Marine Corps reference publication
MCTP	Marine Corps tactical publication
MCWP	Marine Corps warfighting publication
MEB	Marine expeditionary brigade
MEF	Marine expeditionary force
METOC	meteorological and oceanographic

MEU	Marine expeditionary unit
MHE	materials handling equipment
MILDEC	military deception
MISO	military information support operations
MIW	mine warfare
MIWC	mine warfare commander
MNF	multinational force
MOPP	mission-oriented protective posture
MPF	maritime pre-positioning force
MPS	maritime pre-positioning ship
MPSRON	maritime pre-positioning ships squadron
MSC	Military Sealift Command
NATO	North Atlantic Treaty Organization
Navy TACC	Navy tactical air control center
NDP	national disclosure policy
NEO	noncombatant evacuation operation
NMCB	naval mobile construction battalion
NSFS	naval surface fire support
NTTP	Navy tactics, techniques, and procedures
NWP	Navy warfare publication
OE&AS	organization for embarkation and assignment to shipping
OPCON	operational control
OPDS	offshore petroleum discharge system (USN)
OPGEN	operation general matter
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security
OPTASK	operation task
OPTASK AMPHIB	operational tasking amphibious message
OTC	officer in tactical command
OTH	over the horizon
PCO	primary control officer
PERMA	planning, embarkation, rehearsal, movement, and action
PMC	passenger, mail, and cargo
POG	port operations group
R2P2	rapid response planning process
RADC	regional air defense commander
RLT	regimental landing team
ROE	rules of engagement
RO/RO	roll-on/roll-off
SAC	supporting arms coordinator

SACC	supporting arms coordination center (USMC)
SADC	sector air defense commander
SDDC	Military Surface Deployment and Distribution Command
SIGCON	signature control
SIPRNET	SECRET Internet Protocol Router Network
SOF	special operations forces
SPINS	special instructions
SPMAGTF	special purpose Marine air-ground task force
SUW	surface warfare
SUWC	surface warfare commander
SZ	surf zone
TA	target acquisition
TACLOG	tactical-logistical
TACON	tactical control
TACP	tactical air control party
TADC	tactical air direction center
TAO	tactical air officer
TAOC	tactical air operations center (USMC)
TIC	target information center
TTP	tactics, techniques, and procedures
USA	United States Army
USAF	United States Air Force
USG	United States Government
USMC	United States Marine Corps
USN	United States Navy
USTRANSCOM	United States Transportation Command
VISA	Voluntary Intermodal Sealift Agreement
WMD	weapons of mass destruction

PART II—TERMS AND DEFINITIONS

action phase. In amphibious operations, the period of time between the arrival of the landing forces of the amphibious force in the operational area and the accomplishment of their mission. (DOD Dictionary. Source: JP 3-02)

administrative loading. A loading method that gives primary consideration to achieving maximum utilization of troop and cargo space without regard to tactical considerations. Also called **commercial loading.** (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

air support control section. In amphibious operations, the section of the Navy tactical air control center designated to coordinate, control, and integrate all direct-support aircraft and assault-support operations. Also called **ASCS.** (Approved for replacement of "air support coordination section" and its definition in the DOD Dictionary.)

air traffic control section. In amphibious operations, the section of the Navy tactical air control center designed to provide initial safe passage, radar control, and surveillance for close air support aircraft in the operational area. Also called **ATCS.** (DOD Dictionary. Source: JP 3-02)

amphibious advance force. A temporary support force assigned to the amphibious force that conducts shaping operations in the amphibious objective area or operational area prior to the arrival of the amphibious force. (DOD Dictionary. Source: JP 3-02)

amphibious air traffic control center. The centralized air traffic control agency on an amphibious warfare ship responsible for operational control of aircraft departing from and recovering on the ship and tactical control of airborne helicopters in support of amphibious assaults. Also called **AATCC.** (DOD Dictionary. Source: JP 3-02)

amphibious assault. A type of amphibious operation that involves establishing a force on a hostile or potentially hostile shore. (DOD Dictionary. Source: JP 3-02)

amphibious assault vehicle launching area. An area, in the vicinity of and to seaward of the line of departure, to which landing ships proceed and launch amphibious assault vehicles. (DOD Dictionary. Source: JP 3-02)

amphibious breaching. The conduct of a deliberate breaching operation specifically planned to overcome antilanding defenses to conduct amphibious operations. (Approved for incorporation into the DOD Dictionary.)

amphibious construction battalion. A permanently commissioned naval unit, subordinate to the commander, naval beach group, designed to provide an administrative unit from which personnel and equipment are formed in tactical elements and made available to appropriate commanders to operate causeways, transfer barges, warping tugs, and assault bulk fuel systems and to meet salvage

requirements of the naval beach party. Also called **PHIBCB.** (Approved for incorporation into the DOD Dictionary.)

amphibious defense zone. The area encompassing the amphibious objective area and the adjoining airspace required by accompanying naval forces for the purpose of air defense. Also called an **ADZ.** (DOD Dictionary. Source: JP 3-02)

amphibious demonstration A type of amphibious operation conducted for the purpose of deceiving the enemy by a show of force with the expectation of deluding the enemy into following an unfavorable course of action. (DOD Dictionary. Source: JP 3-02)

amphibious force. An amphibious task force and a landing force together with other forces that are trained, organized, and equipped for amphibious operations. Also called **AF.** (DOD Dictionary. Source: JP 3-02)

amphibious objective area. A geographical area of sufficient size for conducting necessary sea, air, and land operations and within which is located the objective(s) to be secured by the amphibious force. Also called **AOA.** (Approved for incorporation into the DOD Dictionary.)

amphibious operation. A military operation launched from the sea by an amphibious force to conduct landing force operations within the littorals. Also called **PHIBOP.** (DOD Dictionary. Source: JP 3-02)

amphibious raid. A type of amphibious operation involving swift incursion into, or temporary occupation of, an objective area followed by a planned withdrawal. (Approved for incorporation into the DOD Dictionary.)

amphibious ready group. A Navy task organization formed to conduct amphibious operations, commanded by an amphibious squadron commander. Also called **ARG.** (Approved for inclusion in the DOD Dictionary.)

amphibious squadron. A tactical and administrative organization composed of amphibious warfare ships used to transport troops and their equipment for an amphibious operation. Also called **PHIBRON.** (DOD Dictionary. Source: JP 3-02)

amphibious task force. A Navy task organization formed to conduct amphibious operations. Also called **ATF.** (DOD Dictionary. Source: JP 3-02)

amphibious vehicle. A wheeled or tracked vehicle capable of operating on both land and water. (DOD Dictionary. Source: JP 3-02)

amphibious vehicle availability table. A tabulation of the type and number of amphibious vehicles available primarily for assault landings and for support of other elements of the operation. (DOD Dictionary. Source: JP 3-02)

amphibious vehicle employment plan. A plan showing, in tabular form, the planned employment of amphibious vehicles during landing operations, to include initial movement to the beach. (Approved for incorporation into the DOD Dictionary.)

amphibious warfare ship. A combatant ship having organic capability to embark, land, and support landing forces in amphibious operations and which has characteristics enabling long-duration operations on the high seas. (Approved for incorporation into the DOD Dictionary.)

amphibious withdrawal. A type of amphibious operation involving the extraction of forces by sea in ships or craft from a hostile or potentially hostile shore. (DOD Dictionary. Source: JP 3-02)

approach schedule. In amphibious operations, a schedule that indicates, for each scheduled wave, the time of departure from the rendezvous area, from the line of departure and from other control points, and the time of arrival at the beach. (Approved for incorporation into the DOD Dictionary.)

assault. 1. In an amphibious operation, the period of time between the arrival of the major assault forces of the amphibious task force in the objective area and the accomplishment of the amphibious task force mission. (JP 3-02) 2. To make a short, violent, but well-ordered attack against a local objective, such as a gun emplacement, a fort, or a machine gun nest. (JP 3-18) 3. A phase of an airborne operation beginning with delivery by air of the assault echelon of the force into the objective area and extending through attack of assault objectives and consolidation of the initial airhead. (DOD Dictionary. Source: JP 3-18)

assault breaching. A part of amphibious breaching in support of an amphibious assault involving a fire support mission using precision-guided munitions to neutralize mines and obstacles in the surf zone and on the beach. (Approved for incorporation into the DOD Dictionary.)

assault craft unit. A permanently commissioned naval organization, subordinate to the commander, naval beach group, that contains landing craft and crews necessary to provide lighterage required in an amphibious operation. Also called **ACU.** (DOD Dictionary. Source: JP 3-02)

assault echelon. In amphibious operations, the element of a force comprised of tailored units and aircraft assigned to conduct the initial assault on the operational area. Also called **AE.** (DOD Dictionary. Source: JP 3-02)

assault follow-on echelon. In amphibious operations, that echelon of the assault troops, vehicles, aircraft, equipment, and supplies that, though not needed to initiate the assault, is required to support and sustain the assault. Also called **AFOE.** (DOD Dictionary. Source: JP 3-02)

assault schedule. In amphibious operations, a schedule that provides the formation, composition, and timing of waves landing over the beach. (Approved for incorporation into the DOD Dictionary.)

attack group. A subordinate task organization of the Navy forces of an amphibious task force composed of amphibious warfare ships and supporting naval units designated to transport, protect, land, and initially support a landing group. (DOD Dictionary. Source: JP 3-02)

battalion landing team. 1. In an amphibious operation, an infantry battalion normally reinforced by necessary combat and service elements. 2. The basic unit for planning an assault landing. Also called **BLT.** (Approved for incorporation into the DOD Dictionary.)

beach. 1. The area extending from the shoreline inland to a marked change in physiographic form or material or to the line of permanent vegetation (coastline). 2. In amphibious operations, that portion of the shoreline designated for landing of a tactical organization. (Approved for incorporation into the DOD Dictionary.)

beachhead. A designated area on a hostile or potentially hostile shore that, when seized and held, ensures the continuous landing of troops and materiel and provides maneuver space requisite for subsequent projected operations ashore. (Approved for incorporation into the DOD Dictionary.)

beach party. The Navy component of the landing force support party under the tactical control of the landing force support party commander. (DOD Dictionary. Source: JP 3-02)

beach support area. In amphibious operations, the area to the rear of a landing force, or elements thereof, that contains the facilities for the unloading of troops and materiel and the support of the forces ashore. Also called **BSA.** (Approved for incorporation into the DOD Dictionary.)

boat group. The basic organization of landing craft. (DOD Dictionary. Source: JP 3-02)

boat lane. A lane for amphibious assault landing craft, which extends from the line of departure to the beach. (DOD Dictionary. Source: JP 3-02)

boat space. The space and weight factor used in planning for one person with individual equipment to determine overall ship-to-shore movement requirements for boats, landing craft, and amphibious vehicles. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

broken stowage. The space lost in the holds of a vessel because of the contour of the ship, dunnage, ladders, stanchions, and the shape of the cargo. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

broken stowage factor. A factor applied to the available space for embarkation, due to the loss between boxes, between vehicles, around stanchions, and over cargo, that will

vary depending on the type and size of vehicles, type and size of general cargo, training and experience of loading personnel, type of loading, method of stowage, and configuration of compartments. (Approved for incorporation into the DOD Dictionary.)

casualty receiving and treatment ship. In amphibious operations, a ship designated to receive, provide treatment for, and transfer casualties. Also called **CRTS.** (DOD Dictionary. Source: JP 3-02)

causeway launching area. An area located near the line of departure but clear of the approach lanes to an area located in the inner transport area. (DOD Dictionary. Source: JP 3-02)

central control officer. The officer, embarked in the central control ship, designated by the amphibious task force commander for the overall coordination of the waterborne ship-to-shore movement. Also called **CCO.** (DOD Dictionary. Source: JP 3-02)

close support area. Those parts of the ocean operating areas nearest to, but not necessarily in, the objective area. (DOD Dictionary. Source: JP 3-02)

colored beach. That portion of usable coastline sufficient for the assault landing of a regimental landing team or similar-sized unit. (Approved for incorporation into the DOD Dictionary.)

combat cargo officer. A Marine Corps embarkation/mobility officer permanently assigned to amphibious warfare ships or naval staffs as an adviser to, and representative of, the naval commander in matters pertaining to embarkation and debarkation of troops and their supplies and equipment. Also called **CCO.** (Approved for incorporation into the DOD Dictionary.)

combat loading. The arrangement of personnel and the stowage of equipment and supplies in a manner designed to conform to the anticipated tactical operation of the organization embarked. (DOD Dictionary. Source: JP 3-02)

combat organizational loading. A method of loading by which a unit with its equipment and initial supplies is loaded into a single ship, together with other units, in such a manner as to be available for unloading in a predetermined order. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

combat service support area. An area ashore that is organized to contain the necessary supplies, equipment, installations, and elements to provide the landing force with combat service support throughout the operation. Also called **CSSA.** (DOD Dictionary. Source: JP 3-02)

combat spread loading. A method of combat loading by which some of the troops, equipment, and initial supplies of a unit are loaded in one ship and the remainder are loaded in one or more others. (Approved for the incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

combat unit loading. A method of loading by which all or a part of a combat unit, such as an assault battalion landing team, is completely loaded in a single ship, with essential combat equipment and supplies, in such a manner as to be immediately available to support the tactical plan upon debarkation and to provide a maximum of flexibility to meet possible changes in the tactical plan. (Approved for incorporation into the DOD Dictionary.)

commander, amphibious task force. The Navy officer designated in the initiating directive as the commander of the amphibious task force. Also called **CATF**. (DOD Dictionary. Source: JP 3-02)

commander, landing force. The officer designated in the initiating directive as the commander of the landing force for an amphibious operation. Also called **CLF.** (DOD Dictionary. Source: JP 3-02)

commanding officer of troops. On a ship that has embarked units, a designated officer (usually the senior embarking unit commander) who is responsible for the administration, discipline, and training of all embarked units. Also called **COT.** (DOD Dictionary. Source: JP 3-02)

commodity loading. A method of loading in which various types of cargoes are loaded together, such as ammunition, rations, or boxed vehicles, in order that each commodity can be discharged without disturbing the others. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

control area. A controlled airspace extending upwards from a specified limit above the Earth. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

control group. Personnel and ships designated to control the surface ship-to-shore movement. (Approved for incorporation into the DOD Dictionary.)

convoy. 1. A number of merchant ships and/or naval auxiliaries usually escorted by warships and/or aircraft—or a single merchant ship or naval auxiliary under surface escort—assembled and organized for the purpose of passage together. 2. A group of vehicles organized for the purpose of control and orderly movement with or without escort protection that moves over the same route at the same time and under one commander. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

covering fire. None. (Approved for removal from the DOD Dictionary.)

D-day. The unnamed day on which a particular operation commences or is to commence. (DOD Dictionary. Source: JP 3-02)

debarkation. The unloading of troops, equipment, or supplies from a ship or aircraft. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

debarkation schedule. A schedule that provides for the timely and orderly debarkation of troops and equipment and emergency supplies for the waterborne ship-to-shore movement. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

distant retirement area. In amphibious operations, the sea area located to seaward of the landing area to which assault ships may retire and operate in the event of adverse weather or to prevent concentration of ships in the landing area. (DOD Dictionary. Source: JP 3-02)

E-day. The day landing force personnel, supplies, and equipment begin to embark aboard amphibious warfare or commercial ships. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation. The process of putting personnel and/or vehicles and their associated stores and equipment into ships and/or aircraft. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation area. An area ashore, including a group of embarkation points, in which final preparations for embarkation are completed and through which assigned personnel and loads for craft and ships are called forward to embark. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation element. A temporary administrative formation of personnel with supplies and equipment embarking or to be embarked (combat loaded) aboard the ships of one transport element. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation group. A temporary administrative formation of personnel with supplies and equipment embarking or to be embarked (combat loaded) aboard the ships of one transport element group. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation officer. An officer on the staff of units of the landing force who advises the commander thereof on matters pertaining to embarkation planning and loading ships. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation order. An order specifying dates, times, routes, loading diagrams, and methods of movement to shipside or aircraft for troops and their equipment. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation organization. A temporary administrative formation of personnel with supplies and equipment embarking or to be embarked aboard ships. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation phase. In amphibious operations, the phase that encompasses the orderly assembly of personnel and materiel and their subsequent loading aboard ships and/or aircraft in a sequence designed to meet the requirements of the landing force concept

of operations ashore. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation plans. The plans prepared by the landing force and appropriate subordinate commanders containing instructions and information concerning the organization for embarkation, assignment to shipping, supplies and equipment to be embarked, location and assignment of embarkation areas, control and communication arrangements, movement schedules and embarkation sequence, and additional pertinent instructions relating to the embarkation of the landing force. (DOD Dictionary. Source: JP 3-02)

embarkation team. A temporary administrative formation of all personnel with supplies and equipment embarking or to be embarked (combat loaded) aboard one ship. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

embarkation unit. A temporary administrative formation of personnel with supplies and equipment embarking or to be embarked (combat loaded) aboard the ships of one transport unit, which is dissolved upon completion of the embarkation. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

establishing directive. An order issued to specify the purpose of the support relationship. (DOD Dictionary. Source: JP 3-02)

fire support station. An exact location at sea within a fire support area from which a fire support ship delivers fire. Also called **FSS.** (DOD Dictionary. Source: JP 3-02)

flight deck. 1. In certain airplanes, an elevated compartment occupied by the crew for operating the airplane in flight. 2. The upper deck of an aircraft carrier that serves as a runway. 3. The deck of an air-capable ship, amphibious assault ship, or aircraft carrier used to launch and recover aircraft. (Approved for incorporation into the DOD Dictionary.)

floating dump. Emergency supplies preloaded in landing craft, amphibious vehicles, or in landing ships that are located in the vicinity of the appropriate control officer, who directs their landing as requested by the troop commander concerned. (DOD Dictionary. Source: JP 3-02)

fly-in echelon. Airlifted forces and equipment (typically associated with the use of pre-positioned assets), to include flight ferry aircraft and aviation support equipment, needed to support operations. Also called **FIE.** (Approved for incorporation into the DOD Dictionary.)

follow-up. In amphibious operations, the reinforcements and stores carried on ships and aircraft (not originally part of the amphibious force) that are off-loaded after the assault and assault follow-on echelons have been landed. (DOD Dictionary. Source: JP 3-02)

follow-up shipping. Ships not originally a part of the amphibious task force but which deliver troops and supplies to the objective area after the action phase has begun. (DOD Dictionary. Source: JP 3-02)

general agency agreement. A contract between the Maritime Administration and a steamship company which, as general agent, exercises administrative control over a government-owned ship for employment by the Military Sealift Command. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

general unloading period. In amphibious operations, that part of the ship-to-shore movement in which unloading is primarily logistic in character and emphasizes speed and volume of unloading operations. (Approved for incorporation into the DOD Dictionary.)

go/no-go. A critical point at which a decision to proceed or not must be made. (DOD Dictionary. Source: JP 3-02)

hazardous cargo. Cargo that includes not only large bulk-type categories, such as explosives; pyrotechnics; petroleum, oils, and lubricants; compressed gases; and corrosives and batteries, but lesser-quantity materials like super-tropical bleach (oxiderizer), pesticides, poisons, medicines, and specialized medical chemicals and medical waste that can be loaded as cargo. (Approved for incorporation into the DOD Dictionary.)

hazards of electromagnetic radiation to fuels. The potential hazard that is created when volatile combustibles, such as fuel, are exposed to electromagnetic fields of sufficient energy to cause ignition. Also called **HERF.** (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

hazards of electromagnetic radiation to ordnance. The danger of accidental actuation of electro-explosive devices or otherwise electrically activating ordnance because of radio frequency electromagnetic fields. Also called **HERO.** (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

helicopter coordination section. None**.** (Approved for removal from the DOD Dictionary.)

H-hour. 1. The specific hour on D-day at which a particular operation commences. (JP 5-0) 2. In amphibious operations, the time the first landing craft or amphibious vehicle of the waterborne wave lands or is scheduled to land on the beach and, in some cases, the commencement of countermine breaching operations. (Approved for incorporation into the DOD Dictionary.)

horizontal stowage. The lateral distribution of unit equipment or categories of supplies so they can be unloaded simultaneously from two or more holds. (Approved for incorporation into the DOD Dictionary.)

hydrographic reconnaissance. Reconnaissance of an area of water to determine depths; beach gradients; the nature of the bottom; and the location of coral reefs, rocks, shoals, and man-made obstacles. (Approved for incorporation into the DOD Dictionary.)

initial unloading period. In amphibious operations, that part of the ship-to-shore movement in which unloading is primarily tactical in character and must be instantly responsive to landing force requirements. (DOD Dictionary. Source: JP 3-02)

inner transport area. In amphibious operations, an area as close to the landing beach as depth of water, navigational hazards, boat traffic, and enemy action permit, to which transports may move to expedite unloading. (DOD Dictionary. Source: JP 3-02)

instrument meteorological conditions. Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than minimums specified for visual meteorological conditions. Also called **IMC.** (Approved for incorporation into the DOD Dictionary.)

landing area. 1. That part of the operational area within which are conducted the landing operations of an amphibious force. 2. In airborne operations, the general area used for landing troops and materiel either by airdrop or air landing. 3. Any specially prepared or selected surface of land, water, or deck designated or used for takeoff and landing of aircraft. (DOD Dictionary. Source: JP 3-02)

landing area diagram. A graphic means of showing the beach designations, boat lanes, organization of the line of departure, scheduled waves, landing ship area, transport areas, and the fire support areas in the immediate vicinity of the boat lanes. (Approved for incorporation into the DOD Dictionary.)

landing beach. That portion of a shoreline required for the landing of an amphibious force. (DOD Dictionary. Source: JP 3-02)

landing craft. A craft employed in amphibious operations specifically designed for carrying troops and their equipment and for beaching, unloading, retracting, and resupply operations. (Approved for incorporation into the DOD Dictionary.)

landing craft and amphibious vehicle assignment table. A table showing the assignment of personnel and materiel to each landing craft and amphibious vehicle and the assignment of the landing craft and amphibious vehicles to waves for the ship-to-shore movement. (DOD Dictionary. Source: JP 3-02)

landing craft availability table. A tabulation of the type and number of landing craft that will be available from each ship of the transport group. (DOD Dictionary. Source: JP 3-02)

landing diagram. A graphic means of illustrating the plan for the ship-to-shore movement. (DOD Dictionary. Source: JP 3-02)

landing force. A Marine Corps or Army task organization, which is part of the amphibious force, formed to conduct amphibious operations. Also called **LF.** (DOD Dictionary. Source: JP 3-02)

landing force operational reserve material. Package of contingency supplies pre-positioned and maintained onboard selected amphibious warfare ships to enhance reaction time and provide support for the embarked landing force in contingencies. Also called **LFORM.** (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

landing force support party. A temporary landing force organization composed of Navy and landing force elements that facilitates the ship-to-shore movement and provides initial combat support and combat service support to the landing force. Also called **LFSP.** (Approved for incorporation into the DOD Dictionary.)

landing group. In amphibious operations, a subordinate task organization of the landing force capable of conducting landing operations, under a single tactical command, against a position or group of positions. (DOD Dictionary. Source: JP 3-02)

landing plan. In amphibious operations, a collective term referring to all individually prepared amphibious task force and landing force documents that, taken together, present, in detail, all instructions for execution of the ship-to-shore movement. (Approved for incorporation into the DOD Dictionary.)

landing sequence table. A document that incorporates the detailed plans for ship-to-shore movement of nonscheduled units. (DOD Dictionary. Source: JP 3-02)

landing site. 1. A site within a landing zone containing one or more landing points. 2. In amphibious operations, a continuous segment of coastline over which troops, equipment, and supplies can be landed by surface means. (DOD Dictionary. Source: JP 3-02)

L-hour. 1. The specific hour on C-day at which a deployment operation commences or is to commence. (JP 5-0) 2. In amphibious operations, the time at which the first helicopter or tiltrotor aircraft of the airborne ship-to-shore movement wave touches down or is scheduled to touch down in a landing zone. (Approved for incorporation into the DOD Dictionary.)

line of departure. 1. In land warfare, a line designated to coordinate the departure of attack elements. Also called **LD.** (JP 3-31) 2. In amphibious operations, a suitably marked offshore coordinating line, which is located at the seaward end of a boat lane, to assist in the landing of landing craft and amphibious vehicles on designated beaches at the scheduled times. Also called **LOD.** (DOD Dictionary. Source: JP 3-02)

loading plan. All of the individually prepared documents which, taken together, present, in detail, all instructions for the arrangement of personnel and the loading of equipment for one or more units or other special grouping of personnel or material moving by

highway, water, rail, or air transportation. (Approved for incorporation into the DOD Dictionary.)

maritime pre-positioning ships. Civilian-crewed, Military Sealift Command-chartered ships that are usually forward-deployed and loaded with pre-positioned equipment and up to 30 days of supplies to support Marine expeditionary brigades. Also called **MPSs.** (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

massed fire. 1. The fire of the batteries of two or more ships directed against a single target. 2. Fire from a number of weapons directed at a single target point or small area. (DOD Dictionary. Source: JP 3-02)

master. The commander of a United States Naval Ship, a commercial ship, or a government-owned general agency agreement ship operated for the Military Sealift Command by a civilian company to transport Department of Defense cargo. (Approved for incorporation into the the DOD Dictionary with JP 3-02 as the source JP.)

mounting. 1. All preparations made in anticipation of an operation, including assembly in the mounting area; preparation and maintenance within the mounting area; movement to loading points; and subsequent embarkation into ships, craft, or aircraft if applicable. 2. A carriage or stand upon which a weapon is placed. (Approved for incorporation into the DOD Dictionary.)

mounting area. A general locality where assigned forces of an amphibious or airborne operation, with their equipment, are assembled, prepared, and loaded in ships and/or aircraft preparatory to an assault. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

movement group. Those ships and embarked units that load out and proceed to rendezvous in the objective area. (DOD Dictionary. Source: JP 3-02)

movement phase. In amphibious operations, the period during which various elements of the amphibious force move from points of embarkation or forward-deployed locations to the objective area. (Approved for incorporation into the DOD Dictionary.)

movement plan. In amphibious operations, the naval plan providing for the movement of the amphibious task force to the objective area. (DOD Dictionary. Source: JP 3-02)

naval beach group. A permanently organized naval command within an amphibious force, composed of a commander and staff, a beachmaster unit, an amphibious construction battalion, and assault craft units, designed to provide an administrative group from which required naval tactical components may be made available to the amphibious task force commander and to the amphibious landing force commander. Also called **NBG.** (Approved for incorporation into the DOD Dictionary.)

Navy cargo-handling battalion. A mobile logistic support unit that is organized, trained, and equipped to: a. load and off-load Navy and Marine Corps cargo carried in maritime

highway, water, rail, or air transportation. (Approved for incorporation into the DOD Dictionary.)

maritime pre-positioning ships. Civilian-crewed, Military Sealift Command-chartered ships that are usually forward-deployed and loaded with pre-positioned equipment and up to 30 days of supplies to support Marine expeditionary brigades. Also called **MPSs.** (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

massed fire. 1. The fire of the batteries of two or more ships directed against a single target. 2. Fire from a number of weapons directed at a single target point or small area. (DOD Dictionary. Source: JP 3-02)

master. The commander of a United States Naval Ship, a commercial ship, or a government-owned general agency agreement ship operated for the Military Sealift Command by a civilian company to transport Department of Defense cargo. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

mounting. 1. All preparations made in anticipation of an operation, including assembly in the mounting area; preparation and maintenance within the mounting area; movement to loading points; and subsequent embarkation into ships, craft, or aircraft if applicable. 2. A carriage or stand upon which a weapon is placed. (Approved for incorporation into the DOD Dictionary.)

mounting area. A general locality where assigned forces of an amphibious or airborne operation, with their equipment, are assembled, prepared, and loaded in ships and/or aircraft preparatory to an assault. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

movement group. Those ships and embarked units that load out and proceed to rendezvous in the objective area. (DOD Dictionary. Source: JP 3-02)

movement phase. In amphibious operations, the period during which various elements of the amphibious force move from points of embarkation or forward-deployed locations to the objective area. (Approved for incorporation into the DOD Dictionary.)

movement plan. In amphibious operations, the naval plan providing for the movement of the amphibious task force to the objective area. (DOD Dictionary. Source: JP 3-02)

naval beach group. A permanently organized naval command within an amphibious force, composed of a commander and staff, a beachmaster unit, an amphibious construction battalion, and assault craft units, designed to provide an administrative group from which required naval tactical components may be made available to the amphibious task force commander and to the amphibious landing force commander. Also called **NBG.** (Approved for incorporation into the DOD Dictionary.)

Navy cargo-handling battalion. A mobile logistic support unit that is organized, trained, and equipped to: a. load and off-load Navy and Marine Corps cargo carried in maritime

coordinated planning for, and execution of, the amphibious operation. (DOD Dictionary. Source: JP 3-02)

plan for landing. None. (Approved for removal from the DOD Dictionary)

planning phase. In amphibious operations, the phase normally denoted by the period extending from the issuance of the initiating directive up to the embarkation phase. (DOD Dictionary. Source: JP 3-02)

prelanding operations. Operations conducted by the amphibious force upon its arrival in the amphibious objective area or operational area and prior to H-hour and/or L-hour. (DOD Dictionary. Source: JP 3-02)

primary control officer. In amphibious operations, the officer embarked in a primary control ship assigned to control the movement of landing craft, amphibious vehicles, and landing ships to and from a colored beach. Also called **PCO.** (DOD Dictionary. Source: JP 3-02)

primary control ship. In amphibious operations, a ship of the task force designated to provide support for the primary control officer and a combat information center control team for a colored beach. Also called **PCS.** (DOD Dictionary. Source: JP 3-02)

reconstitution. 1. Actions taken to rapidly restore functionality to an acceptable level for a particular mission, operation, or contingency after severe degradation. (JP 3-14) 2. Those actions, including regeneration and reorganization, commanders plan and implement to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources. (JP 3-02) 3. In maritime pre-positioning force operations, the methodical approach to restore the maritime pre-positioned equipment and supplies aboard the maritime pre-positioning ships squadron to full mission-capable status. (JP 3-02) (Approved for incorporation into the DOD Dictionary.)

regimental landing team. A task organization for landing composed of an infantry regiment reinforced by those elements that are required for initiation of its combat function ashore. Also called **RLT.** (Approved for incorporation into the DOD Dictionary.)

rehearsal phase. In amphibious operations, the period after embarkation and prior to the action phase during which the prospective operation is practiced. (Approved for incorporation into the DOD Dictionary.)

rendezvous area. In an amphibious operation, the area in which the landing craft and amphibious vehicles rendezvous to form waves after being loaded and prior to movement to the line of departure. (Approved for incorporation into the DOD Dictionary.)

sea areas. Areas in the amphibious objective area designated for the stationing of amphibious task force ships. (DOD Dictionary. Source: JP 3-02)

seabasing. The deployment, assembly, command, projection, reconstitution, sustainment, and re-employment of joint power from the sea without reliance on land bases within the operational area. (DOD Dictionary. Source: JP 3-02)

sea echelon. A portion of the amphibious warfare ships or other ships that withdraws from or remains out of the transport area during an amphibious landing and operates in designated areas to seaward in an on-call or unscheduled status. (DOD Dictionary. Source: JP 3-02)

sea echelon area. In amphibious operations, an area to seaward of a transport area from which ships are phased into the transport area and to which ships withdraw from the transport area. (Approved for incorporation into the DOD Dictionary.)

sea echelon plan. In amphibious operations, the distribution plan for amphibious shipping in the transport area to minimize losses due to enemy attack and to reduce the area to be swept of mines. (Approved for incorporation into the DOD Dictionary.)

secondary loads. Unit equipment, supplies, and major end items that are transported in the beds of organic vehicles. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

selective loading. The arrangement and stowage of equipment and supplies aboard ship in a manner designed to facilitate issues to units. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

selective off-loading. The capability to access and off-load vehicles, supplies, and equipment without having to conduct a major reconfiguration or total off-load, which is influenced by the number and types of ships allocated and the space made available for the embarkation of the landing force. (Approved for incorporation into the DOD Dictionary.)

selective unloading. In an amphibious operation, the controlled unloading from amphibious warfare ships, and movement ashore, of specific items of cargo at the request of the landing force commander. (DOD Dictionary. Source: JP 3-02)

serial. 1. An element or a group of elements within a series that is given a numerical or alphabetical designation for convenience in planning, scheduling, and control. 2. A group of people, vehicles, equipment, or supplies used in airborne, air assault, amphibious operations, and convoys. (Approved for incorporation into the DOD Dictionary.)

serial assignment table. A table that is used in amphibious operations and shows the serial number, the title of the unit, and the approximate number of personnel; the material, vehicles, or equipment in the serial; the number and type of landing craft and/or amphibious vehicles required to boat the serial; and the ship on which the serial is embarked. (Approved for incorporation into the DOD Dictionary.)

ship-to-shore movement. That portion of the action phase of an amphibious operation that includes the deployment of the landing force from ships to designated landing areas. (DOD Dictionary. Source: JP 3-02)

shore party. A task organization of the landing force, formed for the purpose of facilitating the landing and movement off the beaches of troops, equipment, and supplies; for the evacuation from the beaches of casualties and enemy prisoners of war; and for facilitating the beaching, retraction, and salvaging of landing ships and craft. Also called **beach group.** (DOD Dictionary. Source: JP 3-02)

spot. 1. To determine by observation, deviations of ordnance from the target for the purpose of supplying necessary information for the adjustment of fire. 2. To place in a proper location. 3. An approved shipboard helicopter landing site. (Approved for incorporation into the DOD Dictionary with JP 3-02 as the source JP.)

staging area. 1. Airborne – A general locality between the mounting area and the objective of an airborne expedition through which the expedition, or parts thereof, pass after mounting, for refueling; regrouping; and/or exercise, inspection, and redistribution of troops. (JP 3-35) 2. Other movements – A general locality established for the concentration of troop units and transient personnel between movements over the lines of communications. (JP 3-35). 3. In amphibious operations, one or more intervening ports for refueling, logistic support, emergency repairs, or final rehearsals. Also called **SA.** (JP 3-02) (Approved for incorporation into the DOD Dictionary.)

stowage. The placement of cargo into a hold or compartment or on a deck of a ship in such a way as to prevent damage from load shifts while the ship is underway. (Approved for incorporation into the DOD Dictionary.)

subsidiary landing. In an amphibious operation, a landing usually made outside the designated landing area. (Approved for incorporation into the DOD Dictionary.)

supporting arms. Weapons and weapons systems of all types employed to support forces by indirect or direct fire. (DOD Dictionary. Source: JP 3-02)

supporting operations. In amphibious operations, those operations conducted by forces other than those conducted by the amphibious force. (DOD Dictionary. Source: JP 3-02)

tactical air officer. None. (Approved for removal from the DOD Dictionary.)

tactical-logistical group. Representatives designated by troop commanders to assist Navy control officers aboard control ships in the ship-to-shore movement of troops, equipment, and supplies. Also called **TACLOG group.** (DOD Dictionary. Source: JP 3-02)

tactical reserve. A part of a force held under the control of the commander as a maneuvering force to influence future action. (DOD Dictionary. Source: JP 3-02)

target information center. The agency or activity responsible for collecting, displaying, evaluating, and disseminating information pertaining to potential targets. Also called **TIC.** (DOD Dictionary. Source: JP 3-02)

transport area. In amphibious operations, an area assigned to a transport organization for the purpose of debarking troops and equipment. (DOD Dictionary. Source: JP 3-02)

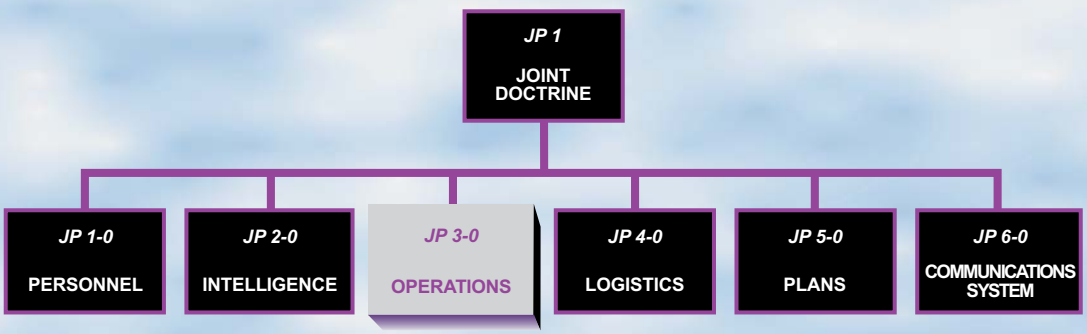
transport group. An element that directly deploys and supports the landing of the landing force and is functionally designated as a transport group in the amphibious task force organization. (Approved for incorporation into the DOD Dictionary.)

troop space cargo. Cargo, such as sea or barracks bags, bedding rolls or hammocks, locker trunks, and office equipment, normally stowed in an accessible place, as well as normal hand-carried combat equipment and weapons to be carried ashore by the assault troops. (Approved for incorporation into the DOD Dictionary.)

vertical stowage. A method of stowage in depth within a single compartment by which loaded items are continually accessible for unloading and the unloading can be completed without corresponding changes or prior unloading of other cargo. (Approved for incorporation into the DOD Dictionary.)

wave. A formation of forces, including landing craft, amphibious vehicles, or aircraft, required to beach or land about the same time. (Approved for incorporation into the DOD Dictionary.)

JOINT DOCTRINE PUBLICATIONS HIERARCHY



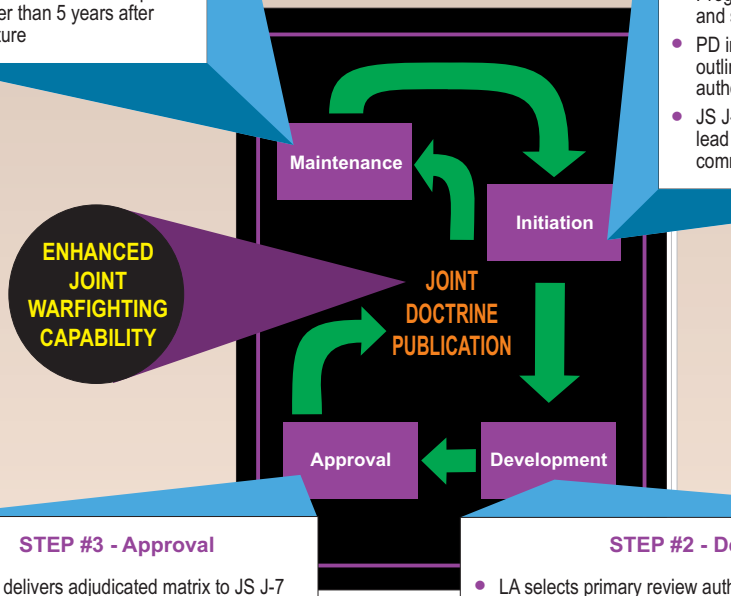
All joint publications are organized into a comprehensive hierarchy as shown in the chart above. **Joint Publication (JP) 3-02** is in the **Operations** series of joint doctrine publications. The diagram below illustrates an overview of the development process:

STEP #4 - Maintenance

- JP published and continuously assessed by users
- Formal assessment begins 24-27 months following publication
- Revision begins 3.5 years after publication
- Each JP revision is completed no later than 5 years after signature

STEP #1 - Initiation

- Joint doctrine development community (JDDC) submission to fill extant operational void
- Joint Staff (JS) J-7 conducts front-end analysis
- Joint Doctrine Planning Conference validation
- Program directive (PD) development and staffing/joint working group
- PD includes scope, references, outline, milestones, and draft authorship
- JS J-7 approves and releases PD to lead agent (LA) (Service, combatant command, JS directorate)



STEP #3 - Approval

- JSDS delivers adjudicated matrix to JS J-7
- JS J-7 prepares publication for signature
- JSDS prepares JS staffing package
- JSDS staffs the publication via JSAP for signature

STEP #2 - Development

- LA selects primary review authority (PRA) to develop the first draft (FD)
- PRA develops FD for staffing with JDDC
- FD comment matrix adjudication
- JS J-7 produces the final coordination (FC) draft, staffs to JDDC and JS via Joint Staff Action Processing (JSAP) system
- Joint Staff doctrine sponsor (JSDS) adjudicates FC comment matrix
- FC joint working group


JOINT
CHIEFS OF STAFF