# What's Old is New Again: Army and Marine Corps Cooperation in Amphibious Operations

A Monograph

by

Maj Benjamin W. Johanningsmeier US Marine Corps



School of Advanced Military Studies US Army Command and General Staff College Fort Leavenworth, KS

2019

Approved for public release; distribution is unlimited

F		Form Approved			
Public reporting bu sources, gathering aspect of this coller Information Operat any other provision number. <b>PLEASE</b>	rden for this collection of and maintaining the data ction of information, inclu- ions and Reports (0704- of law, no person shall I DO NOT RETURN YOU	f information is estimate a needed, and complet iding suggestions for re 0188), 1215 Jefferson be subject to any penal IR FORM TO THE ABC	ed to average 1 hour per r ing and reviewing this coll educing this burden to Dep Davis Highway, Suite 120 ty for failing to comply wit <b>DVE ADDRESS.</b>	response, including the lection of information. partment of Defense, V 4, Arlington, VA 2220 h a collection of inform	e time for reviewing instructions, searching existing data Send comments regarding this burden estimate or any other Washington Headquarters Services, Directorate for 2-4302. Respondents should be aware that notwithstanding nation if it does not display a currently valid OMB control
1. REPORT D	ATE (DD-MM-YY)	(Y) 2. REP			3. DATES COVERED (From - To)
23 03 2019		MASI	EK S I HESIS		JUN 18 - MAY 19
What's Old	is New Again: A	rmv and Marin	e Corps Coopera	tion in	Sa. CONTRACT NUMBER
Amphibious Operations					5b. GRANT NUMBER
					5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S	;)				5d. PROJECT NUMBER
Maj Benjam	in W. Johanning	smeier			
					5e. TASK NUMBER
					5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301					8. PERFORMING ORG REPORT NUMBER
9. SPONSOR ADVANCE	<b>ing / monitorin</b> D MILITARY S	<b>G AGENCY NAM</b> TUDIES PRO	<b>IE(S) AND ADDRE</b> Gram	ESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
					11. SPONSOR/MONITOR'S REPORT NUMBER(S)
12. DISTRIBU Approved fo	TION / AVAILABI	LITY STATEMENT: Distribution i	<b>NT</b> s Unlimited		
13. SUPPLEN	IENTARY NOTES				
<b>14. ABSTRAC</b> Historically, examination interact in a and materiel conduct amp amphibious of conduct amp doctrine the significantly	the Marine Cor of the Army's a joint amphibious solutions. The a phibious operatic operations? Last phibious operatic seaward portion contest it.	ps has not been nd Marine Corj s environment. outhor asks the ons? What dispa ly, are the mate ons? The monog of the littorals	the only amphib ps' current and fu This monograph questions: Can th rrities exist in fut rriel solutions res graph concludes t as maneuver space	ious service. T iture role in an separated the t the Army meet t ure concepts b ident in each se that the Army r ce since the ad	his monograph conducted an aphibious operations and their ability to opic into the areas of doctrine, concepts, he requirements of joint doctrine to etween the services when addressing ervice, or Department, adequate to nust incorporate into their concepts and versaries of the United States can
15. SUBJECT	TERMS	hious Operation	ne: Joint: Landin	a Craft. I and	ag Forge: Littoral: Maring Corns
Ampinoious	Assault, Allipili	orous Operation	us, Joint, Landing	g Clair, Landii	ig i oree, Entoral, warme corps
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	<b>19a. NAME OF RESPONSIBLE PERSON</b> Maj Benjamin W. Johanningsmeier
a. REPORT	b. ABSTRACT	c. THIS PAGE	1		19b. PHONE NUMBER (include area code)
(U)	(U)	(U)	(U)	39	(913) 758-3300
		. , ,		•	Standard Form 298 (Rev. 8-98)

Prescribed by ANSI Std. Z39.18

# Monograph Approval Page

Name of Candidate: Major Benjamin W. Johanningsmeier

Monograph Title: What's Old is New Again: Army and Marine Corps Cooperation in Amphibious Operations

Approved By:

\_\_\_\_\_, Monograph Director John M. Curatola, PhD

\_\_\_\_\_, Seminar Leader

Glen E. Clubb, COL

\_\_\_\_\_, Director, School of Advanced Military Studies Kirk C. Dorr, COL

Accepted this 23rd day of May 2019 by:

\_\_\_\_\_, Director, Graduate Degree Programs Robert F. Baumann, PhD

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the US Army Command and General Staff College or any other government agency. (References to this study should include the foregoing statement.)

Fair use determination or copyright permission has been obtained for the inclusion of pictures, maps, graphics, and any other works incorporated into this manuscript. A work of the US government is not subject to copyright, however further publication or sale of copyrighted images is not permissible.

# Abstract

What's Old is New Again: Army and Marine Corps Cooperation in Amphibious Operations, by Major Benjamin W. Johanningsmeier, USMC, 39 pages.

Historically, the Marine Corps has not been the only amphibious service. This monograph conducted an examination of the Army's and Marine Corps' current and future role in amphibious operations and their ability to interact in a joint amphibious environment. This monograph separated the topic into the areas of doctrine, concepts, and materiel solutions. The author asks the questions: Can the Army meet the requirements of joint doctrine to conduct amphibious operations? What disparities exist in future concepts between the services when addressing amphibious operations? Lastly, are the materiel solutions resident in each service, or Department, adequate to conduct amphibious operations? The monograph concludes that the Army must incorporate into their concepts and doctrine the seaward portion of the littorals as maneuver space since the adversaries of the United States can significantly contest it.

# Table of Contents

Abstract	iii
Acknowledgments	v
Acronyms	vi
Illustrations	viii
Section 1: Introduction	
Section 2: Doctrine	
Section 3: Service Concepts	
Section 4: Materiel Solutions	
Section 5: Conclusion	
Appendix 1: Definitions and Amphibious Phases	
Definitions	
Amphibious Phases	
Bibliography	

#### Acknowledgments

My time at SAMS would not be near as successful without the support of some key individuals. First, and foremost, is my wife, Michelle. Through late nights and weekends at the library, she made sure the family had everything we needed while I was in turn able to focus on the task of being a student. Next, I thoroughly appreciated the conversations and thoughts from Seminar 9's Faculty Advisor, Dr. Peter Schifferle. He challenged our view of the world in order to enhance both the syllabus and our future endeavors. This study, up to this point, has been the largest academic effort I have written. It simply would not have been possible without my Monograph Director, Dr. John Curatola's mentorship. I appreciated having a former Marine in my corner. Lastly, my thanks would be incomplete without thanking my Seminar Leader, COL Glen Clubb. His insights and nuanced approaches to often unthought of concerns significantly enriched Seminar 9's overall academic experience.

# Acronyms

ACE	Air Combat Element	
ACR	Armored Cavalry Regiment	
AF	Amphibious Force	
AOC	Army Operating Concept	
ВСТ	Brigade Combat Team	
CE	Command Element	
CJCS	Chairman of the Joint Chiefs of Staff	
СОА	Course of Action	
COG	Center of Gravity	
DoD	Department of Defense	
DoN	Department of the Navy	
DOTMLPF	LPF Doctrine, Organization, Training, Materiel, Leadership and Education,	
	Personnel, Facilities	
EABO	Expeditionary Advance Base Operations	
EF21	Expeditionary Force 21	
FHA	Foreign Humanitarian Aid	
GCE	Ground Combat Element	
HA/DR	Humanitarian Aid/Disaster Relief	
JCS	Joint Chiefs of Staff	
JLOTS	Joint Logistics Over the Shore	
LCE	Logistic Combat Element	
LCU	Landing Craft, Utility	
LCVP	Landing Craft, Vehicle, Personnel	
LF	Landing Force	
LOCE	Littoral Operations in a Contested Environment	

LSV	Logistic Support Vessel
MAGTF	Marine Air Ground Task Force
МСО	Major Combat Operations
MDO	Multi-Domain Operations
MEU	Marine Expeditionary Unit
MEB	Marine Expeditionary Brigade
MEF	Marine Expeditionary Force
MSV(L)	Maneuver Support Vessel, Light
NEO	Noncombatant Evacuation Operations
POR	Program of Record
POTUS	President of the United States
SECDEF	Secretary of Defense
SS	Sea State
ST	Short Tons
TRAP	Tactical Recovery of Aircraft and Personnel
TWMP	Track-Width Mine Plow
USMC	United States Marine Corps
USSR	Union of Soviet Socialist Republics
WEZ	Weapon Engagement Zone

# Illustrations

Figure 1. Army helicopters on the Navy aircraft carrier USS Dwight D. Eisenhower 6
Figure 2. Graphic Depiction, with Definition, of a Littoral
Figure 3. MAGTF Organization 15
Figure 4. Types of MAGTFs 16
Figure 5. Armored Cavalry Regiment Organization
Figure 6. Joint Forcible Entry Operations
Figure 7. Inside and Outside Force within Expeditionary Advance Base Operations
Figure 8. US Navy and US Army Continuum of Watercraft and Ships
Figure 9. Comparison of US Navy Landing Craft, Current and Replacement
Figure 10. Army Landing Craft
Figure 11. Amphibious Operations, Historical Usage Since 1990

## Section 1: Introduction

They knew, moreover, that an army acting oversea against hostile territory is an incomplete organism incapable of striking its blow in the most effective manner without the assistance of the men of the fleet. It was the office, then, of the naval portion of the force not only to defend the striking part of the organism, but to complete its deficiencies and lend it the power to strike. Alone and unaided the army cannot depend on getting itself ashore, it cannot supply itself, it cannot secure its retreat, nor can it avail itself of the highest advantages of an amphibious force, the sudden shift of base or line of operation. These things the fleet must do for it, and it must do them with its men.

-Sir Julien S. Corbett, Some Principles of Maritime Strategy

June 6, 1944, Operation Overlord began with the world's largest amphibious assault. Operation Neptune, the amphibious landings along the shores of Normandy, France involved 34,200 US Army soldiers on Omaha Beach and an additional 23,250 on Utah Beach among a total of 156,000 allied troops.<sup>1</sup> During Operation Neptune, the largest US amphibious operation in history, the only United States ground forces involved were from the US Army. Shifting to the Pacific theater of World War II, from April to June of 1945, both the US Army and the US Marine Corps jointly conducted Operation Iceberg, the invasion of the Ryukyu island group. From US Navy vessels, the Army and Marine Corps landed over 180,000 soldiers and marines on the island of Okinawa, the largest island in the Ryukyu group.<sup>2</sup> Both historical examples mentioned here exemplify the US Army successfully conducting amphibious operations as part of a combined or joint force. In the past seventy-five years, the US Marine Corps has taken over the primary role of the United States' premier amphibious force.<sup>3</sup> However, as seen in joint doctrine, the US Army still plays a part in all of the forms of amphibious operations.

According to joint doctrine, the US Army and US Marine Corps must cooperate during the conduct of amphibious operations. Each service must address this joint requirement in their

<sup>&</sup>lt;sup>1</sup> Jacob F. Field, *D-Day in Numbers: The Facts Behind Operation Overlord* (London, England: Michael O'Mara Books Limited, 2014), 139, 147.

<sup>&</sup>lt;sup>2</sup> Ernest Dupuy and Trevor Dupuy, *The Harper Encyclopedia of Military History: From 3500 B.C. to the Present*, 4th ed. (New York, NY: HarperCollins Publishers Inc, 1993), 1303-1306

<sup>&</sup>lt;sup>3</sup> United States of America, 10 US Code §5063, US Marine Corps: composition; functions (Washington, DC: Government Printing Office, 1986).

doctrine and future concepts to successfully accomplish the applicable joint tasks. For example, Joint Publication (JP) 3-02, *Amphibious Operations*, tasks both the US Army and US Marine Corps with providing a Landing Force (LF) consisting of ground combat units and any of its combat support and combat service support units.<sup>4</sup> While the Marine Corps remains the primary amphibious force, the Army plays a vital role in the conduct of virtually all amphibious operations.

The US Army must include operations in the littorals as a part of their future doctrine, concepts and materiel solutions. Therefore, this study will answer the question: Can the Army meet the requirements of joint doctrine to conduct amphibious operations? Answering the following subordinate question will underpin the overarching purpose of this study: What doctrinal disparities exist between Army and Marine Corps service doctrine when compared to joint doctrine requirements? There are extensive current publications and programs within the Marine Corps to train and conduct all amphibious operations. However, it does not appear that either service or Department considers what the other has as potentially complementary capabilities and capacities. If remedied, the increased interoperability and capability will allow improved US military presence in contested and benign amphibious environments.

The US Army inadequately addresses this area transitioning between the sea and land domain. Each service continuously develops concepts to address what they believe are upcoming challenges coupled with how they might meet them. The Marine Corps continues to focus on developing amphibious capabilities while other threats continue to emerge and environments continue to evolve. The Army focuses its conceptual efforts on winning land wars and operations across multiple domains. How the Army addresses the sea domain and its effect on land is an area of concern. What disparities exist in future concepts between the services when addressing

<sup>&</sup>lt;sup>4</sup> US Department of Defense, Joint Staff, *Joint Publication (JP) 3-02, Amphibious Operations* (Washington, DC: Government Printing Office, 2014), xii-xiii.

amphibious operations? While current doctrine may be deficient, future concepts in both the Army and Marine Corps may address the joint nature of the problem and requires analysis.

Both the Army and Marine Corps use the doctrine, organization, training, materiel, leadership and education, personnel, facilities (DOTMLPF) construct to address needed capabilities specific to amphibious operations. This study addresses, doctrine, organization, and materiel from DOTMLPF. This treatise purposefully excludes considerations in training, leadership, personnel, and facilities. These are areas for future discourse. However, this study will additionally discus conceptual efforts as a look towards the future. The aim of this paper is to address those salient issues that underpin the services' roles, missions, and operations.

Definitions of specific terms, in the Appendix, allow improved understanding of the topic of this study. These definitions will dispel common misperceptions and lay a foundation for comparison of different services' methods of meeting the requirements of these terms. For example, there is a perception that the amphibious assault is the only type of amphibious operation. That was, at one time, the case.<sup>5</sup> However, in current joint doctrine, five types of amphibious operations exist. Listed alphabetically they are assault, demonstration, raid, support to crisis response and other operations, and withdrawal.<sup>6</sup> See Annex 1. This study will focus primarily on the amphibious assault.

Sources for this study will reside at the unclassified, open source level. Limiting sources to this classification level prohibits discussing the most current decisions regarding material solution acquisitions and emerging concepts. However, conclusions regarding Army and Marine Corps challenges remains relevant to current and future applications in amphibious operations.

Several assumptions to allow this study to progress. Chief among them is that amphibious operations remain a viable method of employing forces, by both the Army and Marine Corps, to

<sup>&</sup>lt;sup>5</sup> US Department of Defense, Joint Staff, Joint Chiefs of Staff Publication 1, Department of Defense Military and Associated Terms (Washington, DC, Government Printing Office, 1984), 28

<sup>&</sup>lt;sup>6</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), I-2-3

meet strategic and operational goals. This study also assumes the upcoming revised edition of JP 3-02, *Amphibious Operations*, will continue to include the Army. It also assumes JP 3-02 will not decrease the types of amphibious operations listed within its chapters.

This study must first begin with a caveat. The Marine Corps has congressionally defined, Title X roles and missions that are amphibious in nature.<sup>7</sup> No assumptions or conclusions made within this study intend to imply replacing or ceding the specific set of skills and capabilities required to accomplish one or all five of the doctrinally defined types of amphibious operations. From the Marine Corps perspective, discussing amphibious operations in the Army could be discerned as a threat to the roles and missions of the Marine Corps. The assumptions to negate that concern are two-fold; the Marine Corps will continue to be the United States premier amphibious force, but high-intensity conflict will require a joint solution with overlapping and complementary capabilities. The findings of this study ultimately identify a need to increase coordination, interoperability, and integration between two different services within the Department of Defense.

### Section 2: Doctrine

We've got to include more of a Joint force in everything we do. We have to become fully integrated into Joint warfighting. Our exercises have to be done in a Joint context. Our doctrines have to be developed keeping in mind that we're going to fight as a member of a Joint team. We should have in mind that we're developing the force to contribute to the Joint force commander.

—General Kevin P. Byrnes, Army Training and Doctrine Command, Seabasing Joint Integrating Concept, 2005

In October 1962, the Cold War between the Union of Soviet Socialist Republics (USSR) and the United States nearly became a full-scale conflict. Though the largest concern was whether the USSR would launch their nuclear-laden missiles stationed in Cuba, conventional US forces were positioning themselves in locations in close proximity to Cuba, specifically Florida. For this

<sup>&</sup>lt;sup>7</sup> United States of America, 10 US Code §5063, United States Marine Corps: composition; functions (Washington, DC, 1986).

possible invasion, the US Army would have to transit aboard Army and Navy watercraft to make the final leg of the journey across the ocean separating Cuba from the United States.<sup>8</sup> A crucial part, Operational Plan 314, included the conduct of an amphibious operation, specifically an amphibious assault. Up to this time, the US Army had not conducted an amphibious landing since the Korean War at Inchon in 1950.<sup>9</sup> The impending invasion of Cuba would be the first time that the 159th Transportation Battalion (Boat) would conduct this mission.<sup>10</sup> Units from Fort Hood, TX, and Fort Eustis, VA, assembled in Kings Bay, GA and awaited the order to begin the movement towards an assault. A peaceful compromise diverted the events leading to the invasion of Cuba, and all watercraft and maneuver units eventually returned to their home duty stations. Although an amphibious assault did not occur, the Army had the plans, personnel, and equipment organized to conduct the operation if necessary. Operational Plan 314 included simultaneous air and amphibious assaults on Cuba that could occur within twenty-four hours of the execution order.<sup>11</sup> This historical example of what almost occurred described an operation, amphibious in nature. In Operation Plan 314, the Army and Marine Corps planned their Cuban amphibious efforts separately.

On September 30, 1991, in Haiti, a military coup overthrew the democratically elected president. While US President Clinton called for a restoration of democracy from the military junta, the US military created plans to restore democracy potentially by force.<sup>12</sup> Initially, political

<sup>&</sup>lt;sup>8</sup> Richard Killblane, "159th Transportation Battalion (Boat) (Terminal)," *United States Army Transportation Command*, accessed November 29, 2018, http://www.transportation.army.mil/history/documents/159th%20Term%20Bn.pdf.

<sup>&</sup>lt;sup>9</sup> Although considered a mostly Marine Corps operation, elements of the Army's X Corps with the 7<sup>th</sup> Infantry Division were present at the amphibious landings alongside the Marine Corps' 1st Marine Division.

<sup>&</sup>lt;sup>10</sup> Killblane, "159th Transportation Battalion (Boat) (Terminal)."

<sup>&</sup>lt;sup>11</sup> Aleksandr A. Fursenko and Timothy J. Naftali, "One Hell of a Gamble": Khrushchev, Castro, and Kennedy, 1958 - 1964, paperback ed. (New York: Norton, 1998), 212, 270, 274.

<sup>&</sup>lt;sup>12</sup> US State Department, Office of the Historian, "Intervention in Haiti, 1994-1995," *Milestones in the History of U.S. Foreign Relations: 1993-2000*, accessed December 11, 2018,

messaging and pressure from the international community had no success in convincing the military leadership in Haiti to reinstate the democratic government. Meanwhile, the US Atlantic Command oversaw plans for an air assault and simultaneous amphibious surface assault by the Army and Marine Corps, respectively. Regarding the Army's participation, what occurred is still considered unorthodox. 2,000 Army soldiers and fifty-eig helicopters of the 10th Mountain Division embarked on the Navy aircraft carrier, USS Dwight D. Eisenhower, and took part in Operation Uphold Democracy. The carrier departed Norfolk, VA on 14 September 1994 and reached the waters off Haiti near Port au Prince three days later. Meanwhile, as part of the same detailed planning effort, elements of the 2nd Marine Regiment prepared to conduct a surface amphibious assault at Cap Haitien. Following successful negotiations with Haiti's military junta, the troops landed via air and surface without resistance on 19 and 20 September, respectively.<sup>13</sup>



Figure 1. Army helicopters on the Navy aircraft carrier USS Dwight D. Eisenhower. Photo taken by US Navy. http://usnhistory.navylive.dodlive.mil/2017/10/17/the-40th-anniversary-commissioning-of-uss-dwight-d-eisenhower-cvn-69/

https://history.state.gov/milestones/1993-2000/haiti. A military junta is a group that rules a country after taking power by force.

<sup>&</sup>lt;sup>13</sup> Daniel Garas, "The 40th Anniversary, Commissioning of USS Dwight D. Eisenhower (CVN-69)," *The Sextant, Naval History and Heritage Command*, last modified October 17, 2017, accessed November 21, 2018, http://usnhistory.navylive.dodlive.mil/2017/10/17/the-40th-anniversary-

Also, during Operation Uphold Democracy, the Army's 7th Transportation Group required all watercraft and support assets to deploy in support of operations around Haiti. This requirement meant all Logistics Support Vessels (LSV) and Landing Craft, Utility (LCU) 2000s were deployed in support of Operation Uphold Democracy.<sup>14</sup> Road conditions in Haiti were considered some of the worst in the world. These poor land transportation routes made any overland delivery of supplies untenable. Air delivery via CH-47 helicopter limited the amount of supplies in each load due to weight restrictions. Initially, there were only small Special Forces teams in remote areas of the island. As forces across the island increased, LCU 2000s were used to deliver supplies to the far reaches of the island.<sup>15</sup> The close coordination and conduct of simultaneous landings of the Army and Marine Corps would be, by today's definitions, considered part of a more extensive, joint, amphibious operation. Operation Uphold Democracy exhibited both the Army and Marine Corps' ability to launch and sustain from the sea.

In both the Cuban Missile Crisis and Operation Uphold Democracy, the Army and Marine Corps demonstrated unique but complementary amphibious capabilities to support US policy and operations. Due to the rapid pace of events surrounding the Cuban Missile Crisis and the detailed planning required for Uphold Democracy, logistical considerations, task organizations, techniques, and procedures needed to previously exist in doctrine to allow for a

commissioning-of-uss-dwight-d-eisenhower-cvn-69/; US Atlantic Command, *Operation Uphold Democracy: US Forces in Haiti* (Washington, DC: OC Incorporated, 1997), 3, 9-13.

<sup>&</sup>lt;sup>14</sup> Killblane, "US Army Transportation Corps History," 70 Years of the Transportation Corps, United States Army Transportation Corps, last modified August 16, 2018, accessed December 11, 2018, http://www.transportation.army.mil/history/.

<sup>&</sup>lt;sup>15</sup> United Nations, Mission in Haiti, *Haiti After Action Review*, After Action Review (Vienna, Austria: United Nations, March 1, 1996), 5.

common understanding of capabilities and roles in Army amphibious operations. At the time,

such documents existed. The Army cannot state the same today.

The basic definition of amphibious operations is where the Army departs from the Marine Corps in interoperable, common understanding of amphibious operations. The DoD Dictionary and JP 3-02, *Amphibious Operations* states,

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.<sup>16</sup>

However, the Army's ADRP 1-02, Terms and Military Symbols states amphibious operations are,

A military operation launched from the sea by an amphibious force, embarked in ships or craft with the primary purpose of introducing a landing force ashore to accomplish the assigned mission.<sup>17</sup>

While the Army refers the definition to the counterpart joint doctrine, it does not entirely mirror

it. In this instance, it appears the difference in the two definitions is how the Army views the

littorals. While the joint definition does not differentiate or define a point of origin for the

amphibious force to launch from, the Army appears to do so; from a ship or craft explicitly.

Consider that with a larger scale of time, all embarkation begins from land at a unit's home port.

Though, once in a specific theater of operation, the difference is apparent.

Historically, as in what almost occurred during the Cuban Missile Crisis, and even further back to what occurred at the Battle of Trenton when General Washington crossed the Delaware River in the US Revolutionary War, seeing operations originating from nearby shores as amphibious is accurate.<sup>18</sup> However, in Normandy in June of 1944, the Army and Allied forces

<sup>&</sup>lt;sup>16</sup> US Department of Defense, Joint Staff, *DOD Dictionary of Military and Associated Terms* (Washington, DC: Government Printing Office, 2018, 18; US Joint Staff, *JP 3-02, Amphibious Operations* (2014), GL-7. Emphasis added by author.

<sup>&</sup>lt;sup>17</sup> US Department of the Army, *Army Doctrinal Reference Publication (ADRP) 1-02, Terms and Military Symbols* (Washington, DC: Government Printing Office, 2016), 1-5.

<sup>&</sup>lt;sup>18</sup> Aleksandr A. Fursenko and Timothy J. Naftali, "One Hell of a Gamble": Khrushchev, Castro, and Kennedy, 1958 - 1964, Paperback ed. (New York: Norton, 1998), 212; David Hackett Fischer, Washington's Crossing, Pivotal Moments in American History (Oxford: Oxford Univ. Press, 2006).

embarked on ships, moved across the English Channel, disembarked troops and equipment into landing craft, and assaulted the shores of France against Nazi opposition.<sup>19</sup> This method is also amphibious. Look forward to 1994 and Operation Uphold Democracy. Although the contemporary definition did not categorize an air assault from a naval ship to be an amphibious operation, the current joint definition of amphibious operations categorizes it as such. Although different in historical practice, the Army's definition hinders their ability to operate and integrate within an amphibious environment. It potentially removes the need to incorporate interoperability requirements, such as integration with US Navy shipping, into materiel solution development documents and removes the doctrinal need to create training and organization requirements to conduct the full range of amphibious operations in the future. So, whether shore to shore, or ship to shore, the introduction of a landing force must occur. The origins and assertions of roles and responsibilities for the Army and Marine Corps are the foundation of currently assigned missions, such as introducing a landing force.

Understanding where the missions of amphibious operations are initially assigned is essential to understanding why there is a deficiency in a doctrinal discussion of amphibious operations. The US Congress, in coordination with the Department of Defense, defines the roles and missions of each service. The US Code, Title X, broadly describes what each service is responsible for maintaining and accomplishing. Title X directs the Marine Corps to "be organized, trained, and equipped to provide fleet Marine forces of combined arms, together with supporting air components, for service with the fleet in the seizure or defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign."<sup>20</sup> Within the Department of Defense (DoD), DoD Directive 5100.01, *Functions of the Department of Defense and Its Major Components* clarifies US Code, Title X, requirements and

<sup>&</sup>lt;sup>19</sup> Field, *D-Day in Numbers: The Facts Behind Operation Overlord* 2014, 147.

<sup>&</sup>lt;sup>20</sup> United States of America, 10 U.S. Code §5063, United States Marine Corps: composition; functions (Washington, DC, 1986).

establishes the functions of each component of the DoD.<sup>21</sup> Primary responsibility is assigned for certain functions to a specific service. That service will then maintain the doctrine and materiel development for that specific function. For instance, the Marine Corps has primary responsibility for developing landing force doctrine, tactics, techniques, procedures, and equipment that are of common interest to the Army and Marine Corps.<sup>22</sup> Title X's description of the Army includes "land combat and service forces and such aviation and *water transport* as may be organic therein. It shall be organized, trained, and equipped primarily for prompt and sustained combat incident to operations on land."<sup>23</sup> In many cases, certain capabilities and functions overlap with one service optimizing themselves to specialize in a specific area while the other services focus on other domains. The US Army must conduct thirteen specific functions of which the third is "conduct airborne and air assault, and *amphibious operations*."<sup>24</sup> As stated, the DoD emphasizes each service's roles within the US military by assigning primary responsibility of a specific function to a specific service.<sup>25</sup> However, services must still meet all assigned functions and missions regardless of primary responsibility designation. With that, the US Army may be required to participate in amphibious operations when a campaign or conflict requires a sizable force to adequately arrange multiple tactical operations simultaneously.<sup>26</sup> Comparison of service requirements in Title X entries and DoD Directives are relevant because they give direct

<sup>&</sup>lt;sup>21</sup> US Department of Defense, *Department of Defense Directive (DODD) 5100.01, Functions of the Department of Defense and Its Major Components* (Washington, DC: Government Printing Office, 2010), 1.

<sup>&</sup>lt;sup>22</sup> Ibid., 32.

<sup>&</sup>lt;sup>23</sup> United States of America, 10 U.S. Code §3062, Policy; composition; organized peace establishment (Washington, DC, 1986).

<sup>&</sup>lt;sup>24</sup> US Department of Defense, *DODD 5100.01*, *Functions of the Department of Defense and Its Major Components* 2010, 30.

<sup>&</sup>lt;sup>25</sup> Ibid., 32.

<sup>&</sup>lt;sup>26</sup> US Department of the Army, *Army Doctrinal Reference Publication (ADRP) 3-0, Operations* (Washington, DC: Government Printing Office, 2017), 3-3. Simultaneity is the act of doing multiple things at the same time. Simultaneously performing multiple decisive action tasks entails a synchronized application of combat power. It requires the ability to conduct operations in depth and to integrate them so that their timing multiples their effectiveness throughout an area of operations across multiple domains.

responsibilities of a significant portion of amphibious doctrine to the Marine Corps, yet the Army must still maintain various ocean-going watercraft and be able to conduct amphibious operations. With this overlap from the Congress and DoD, the Joint Staff then creates and directs doctrine to unify the actions of the Armed Forces.

In many cases, more than one service will participate in an assigned mission and will require common doctrine to direct its execution. For this, joint doctrine is prepared under the direction of the Chairman of the Joint Chiefs of Staff (CJCS). The CJCS creates Joint doctrine to govern the activities and performance of the Armed Forces of the United States in joint operations and provides the doctrinal basis for US military coordination with other US government departments and agencies during operations and US military involvement in multinational operations.<sup>27</sup> One category of joint operations that inherently requires joint interaction is amphibious operations.

As stated earlier, an amphibious operation is a military operation launched from the sea by an amphibious force to conduct landing force operations within the littorals.<sup>28</sup> Sustainment of an amphibious force, especially the landing force during the earliest stages of execution, is complex and presents unique planning considerations for commanders and their staffs in part due

<sup>&</sup>lt;sup>27</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), i.

<sup>&</sup>lt;sup>28</sup> US Department of Defense, *DODD 5100.01, Functions of the Department of Defense and Its Major Components* (2010), 18.



to interactions from land and sea in the littorals.<sup>29</sup>

Figure 2. Graphic Depiction, with Definition, of a Littoral. Created by author. Adapted from US Department of Defense, Joint Staff, *DOD Dictionary of Military and Associated Terms* (Washington, DC: Government Printing Office, 2018), 142.

A common misperception of amphibious operations occurs because it is often conflated with the definition of an amphibious assault. This conflation most likely happens because past iterations of joint doctrine had a narrow definition of amphibious operations. Specifically, they were defined as "an attack launched from the sea by naval and landing forces, embarked in ships or craft involving a landing on a hostile shore."<sup>30</sup> With the current, expanded definition of amphibious operations, the US Army has a vital role in the conducting all five types of

<sup>&</sup>lt;sup>29</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), I-2.

<sup>&</sup>lt;sup>30</sup> US Department of Defense, Joint Chiefs of Staff, *Department of Defense Dictionary of Military* and Associated Terms (JCS Pub 1) (Washington, DC: Government Printing Office, 1984), 28.

amphibious operations; assault, demonstration, raid, support to crisis response and other, and withdrawal; as a landing force. Due to the complexity and myriad considerations, detail and redundancy between joint and service doctrine must exist.

Joint Publication 3-02, *Amphibious Operations*, continues to define a Landing Force as consisting of "ground combat units and any of its combat support and combat service support (CSS) units. The landing force may be composed of United States Marine Corps and United States Army forces, other US forces, and multinational forces."<sup>31</sup> It is important to understand landing forces do not only conduct assaults. The introduction of ground forces ashore in humanitarian aid or crisis response missions still has some form of a landing force. Therefore, doctrine must address how those landing forces organize before the need to execute a mission arrives. In the past, the Army maintained extensive doctrinal material regarding the conduct of amphibious operations. Published in 1961, US Army Field Manual 31-12, *Army Forces in Amphibious Operations*, had well-defined amphibious doctrine providing "fundamental principles, doctrine, and procedures relative to the US Army component of an amphibious task force."<sup>32</sup> It chiefly guided Army commanders and their staff in the planning of, preparation and training for, and participation in an amphibious operation. More importantly, it specifically defined a task-organized landing force as the Assault Landing Team.

The assault landing team is the basic subordinate task organization of the assault echelon of a landing force. It is normally designated by prefixal [sic] words reflecting the type and echelon of the tactical unit around which the tactical grouping is formed, e.g., brigade landing team (Bde LT) and battalion landing team (BLT). For reference purposes, an assault landing team may be further identified according to the type means to be used for ship-to-shore movement, e.g., Bde LT(S) when using surface movement means (landing craft and amphibious vehicles).<sup>33</sup>

<sup>&</sup>lt;sup>31</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), II-7-8.

<sup>&</sup>lt;sup>32</sup> US Department of the Army, *Field Manual (FM) 31-12, Army Force in Amphibious Operations* (Washington, DC: Government Printing Office, 1961), 4.

<sup>&</sup>lt;sup>33</sup> US Army, FM 31-12, Army Force in Amphibious Operations (1961), 2.

Unfortunately, the Army rescinded this informative publication in 1997 with Department of the Army Pamphlet (DA PAM) 25-30.<sup>34</sup> Since then, the Army appears to have largely neglected the requirement to organize and provide an amphibious landing force should the need arise in order to optimize its ability in the land domain; this is especially noticeable with the apparent inability to conduct a surface transported landing force on short notice onto a potentially hostile shore. While the Marine Corps will be the first service considered for this type of operation, the Army must at least be able to meet a similar requirement in the event additional forces are immediately needed. Without the doctrinal organization to account for command and control relationships at the tactical level and the required assets to control domains (sea, air, and land) the Army would be unable to rapidly build up combat power ashore from zero without significant challenges to mission success.

Current joint doctrine maintains formats for landing plans and planning considerations such as command and control.<sup>35</sup> Army doctrine must address the method by which it organizes, trains, and equips a landing force if called upon to be successful in future amphibious assaults and other opposed amphibious operations. JP 3-02 continues to direct this need for task organization:

If [US Army] forces comprise part of the [landing force], they will be task organized with appropriate combat and sustainment capabilities to support the [landing force]. Army forces may provide intra-theater ship-to-shore transport to include landing craft, cargo handling, logistics, traffic control, and engineering capabilities. When Marine Corps forces are employed as the [landing force], 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.<sup>36</sup>

The US Marine Corps trains, organizes, and equips its forces to conducts amphibious operations of all types by forming purpose-built Marine Air Ground Task Forces (MAGTF). All MAGTFs

<sup>&</sup>lt;sup>34</sup> Ibid. Rescinded by DA PAM 25-30 in October 1997.

<sup>&</sup>lt;sup>35</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), Ch III.

<sup>&</sup>lt;sup>36</sup> Ibid., II-8.

consist of four core elements—a command element, a ground combat element (GCE), an aviation combat element (ACE), and a logistics combat element (LCE).<sup>37</sup>



Figure 3. MAGTF Organization. Marine Corps Doctrinal Publication (MCDP) 1-0, Marine Corps Operations 2017, 2-7.

There are three typical sizes of MAGTFs. The largest is the Marine Expeditionary Force (MEF) with approximately 45,000 personnel, the ability to command a Joint Task Force, and continue sustainment for at least 60 days. The medium-sized MAGTF is the Marine Expeditionary Brigade (MEB) with approximately 19,000 personnel and thirty days of sustainment. The smallest MAGTF, the Marine Expeditionary Unit (MEU), is the most common

<sup>&</sup>lt;sup>37</sup> US Navy, *MCDP 1-0, (*2017), 2-6.



with 2,400 Marines and Sailors with sustainment for fifteen days.<sup>38</sup>

Figure 4. Types of MAGTFs. Marine Corps Doctrinal Publication (MCDP) 1-0, Marine Corps Operations 2017, 2-10.

Amphibious operations require forces who are scalable and multi-purpose. The Army does not currently maintain a scalable unit addressing the sea, air, and land domains. Though no longer in the Army organization, a possible comparable unit was the Armored Cavalry Regiment (ACR). Although designed for another purpose, it provided the Army a unit with self-contained and powerful, yet small, combat forces. The significant benefit of the structure of an ACR was similar to that of a MAGTF; one commander, at a relatively subordinate level of a brigade-type echelon, controlled assets in multiple domains needed to accomplish amphibious operations. An ACR provided combined arms capability with organic armor and artillery. It also had rotary air assets, although, a MAGTF has fixed-wing air assets as well. It also provided its own sustainment, or logistics element. Because of this organization and the global commitments of the

<sup>&</sup>lt;sup>38</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), II-9; US Navy, MCDP 1-0 (2017), 2-9 through 2-12.

United States at the time, the Army deemed it likely that the ACR would deploy throughout the world.<sup>39</sup>



Figure 5. Armored Cavalry Regiment Organization. Armored Cavalry Regiment and Separate Brigade and Intelligence and Electronic Warfare Operations 1990, 2-2.

Considering the definition of a littoral, different iterations of the associated ACR doctrine designated various climes and places as special locations that needed to be considered as operating areas for an ACR. The 1987 version of FM 34-35, *Armored Cavalry Regiment and Separate Brigade Intelligence and Electronic Warfare Operation*, included amphibious operations as possible missions or operations for an ACR.<sup>40</sup> However, in the subsequent 1990 version of the same publication, all mention of amphibious operations were removed. In 2011, the

<sup>&</sup>lt;sup>39</sup> US Department of the Army, *Field Manual (FM) 34-35, Armored Cavalry Regiment and Separate Brigade Intelligence and Electronic Warfare Operations* (Washington, DC: Government Printing Office, 1990), 6-1. This publication was originally marked as For Official Use Only. In 1994, the classification was downgraded to Distribution Statement A, For Public Release.

<sup>&</sup>lt;sup>40</sup> US Department of the Army, *Field Manual (FM) 34-35, Armored Cavalry Regiment Intelligence and Electronic Warfare Operations* (Washington, DC: Government Printing Office, 1987), 4-18.

Army reorganized the last ACR into a Stryker Brigade Combat Team (BCT).<sup>41</sup> This restructuring removed significant air capability from that organization thus limiting the effect a relatively small and tailored force could have in the air domain. Scalable, multi-purpose forces are a mainstay of successfully executing all forms of amphibious operations.

One of the five types of amphibious operations further emphasizes the need for a specified organization to conduct these operations successfully. JP 3-02, *Amphibious Operations*, describes an amphibious assault as the most challenging type of amphibious operation and one of the most difficult of all military operations.<sup>42</sup> That joint publication continues by stating that an amphibious assault can establish a beachhead for more extensive operations inland, similar to the Normandy landings in 1944 that opened the European continent to Allied forces.<sup>43</sup> The fundamental goal is to introduce the landing force ashore in a hostile or potentially environment to accomplish the assigned mission.<sup>44</sup> When Marine Corps forces are employed as the landing force, they will be task organized into a MAGTF, the Marine Corps' principal organization for missions across the range of military operations.

If one of the most challenging forms of an amphibious operation is the assault, then the most difficult form of assault is in Joint Forcible Entry Operations (JFEO). To support national interests and achieve national objectives, the United States maintains this capability to gain access

<sup>&</sup>lt;sup>41</sup> US Department of the Army, "Blood and Steel: History, Customs, and Traditions of the 3d Cavalry Regiment," *3rd Cavalry Regiment*, 2018, accessed October 31, 2018, http://www.hood.army.mil/3D CR/files/pdfs/BloodandSteel2018.pdf.

<sup>&</sup>lt;sup>42</sup> US Joint Staff, JP 3-02, Amphibious Operations 2014, IV-9.

<sup>&</sup>lt;sup>43</sup> Ibid., IV-9.

<sup>44</sup> Ibid., I-1.

to a crisis area by forcible entry. The United States cannot depend solely on the cooperation of

contiguous countries to allow the introduction of forces within the crisis area.45



Figure 6. Joint Forcible Entry Operations. US Department of Defense, Joint Staff, Joint Publication (JP) 3-18, Joint Forcible Entry Operations 2018, I-2.

If an amphibious assault is part of the forcible entry operation, it will include air and land assaults that typically originate from the sea. Usually, due to the scale of the operation and joint nature of JFEO, forms of movement during the assault may align along service lines. For example, the air assault and airborne tasks of the forcible entry would belong to Army units while the amphibious surface landings of personnel and equipment heavier than what could airlift ashore would reside within Marine Corps units. If the Army does not allocate forces to an organized surface transported landing force, it restricts the equipment it can take ashore to what can load onto or under a rotary wing or tilt-rotor aircraft; at least until usable runways and associated support

<sup>&</sup>lt;sup>45</sup> US Navy, *MCDP 1-0*, (2001), 2-8; US Department of Defense, Joint Staff, *JP 3-18, Joint Forcible Entry Operations* (Washington, DC: Government Printing Office, 2018), I-1.

equipment is available post-forcible entry. So, the question remains how does the Army organize a landing force for amphibious operations, especially with heavy equipment such as the Abrams Main Battle Tank? The answer begins with the existing Army watercraft inventory.

The US Army currently maintains a fleet of watercraft. It is important to note that the Army also maintains doctrine associated with the watercraft in its inventory. The logistics and sustainment-centric document states:

Watercraft support operation of strategic ports and provide the additional capability of moving forces forward via inland waterways. Watercraft are essential in establishing and supporting sea basing operations. The TBX [Transportation Brigade, Expeditionary] provides mission command of watercraft in a combatant commander's area of operation. Army terminal battalions provide control of watercraft supporting terminal and seabasing operations. Army watercraft may support amphibious and riverine operations.<sup>46</sup>

Within Army watercraft operations doctrine, there is a section describing amphibious operations. A critical difference in definition drives how this publication appears to describe amphibious operations to the Army.

While a simple word search for the word "Army" finds entries on only twenty-one of the 235 pages in JP 3-02, *Amphibious Operations*, the US Army has a significant role in amphibious operations that occur either after an amphibious assault or in Other amphibious operations in the form of sustainment or logistics. For example, the ability for the United States to successfully conduct Joint Logistics Over the Shore (JLOTS) relies a great deal on Army expertise and equipment. However, JLOTS will typically occur a number of days after an assault, or natural disaster occurs. If given enough time, the Army brings significant sustainment assets to a theater. This level of sustainment will be pivotal in any large scale event. The Army has nearly all elements required to complete most types of amphibious operations minus the organization of forces and naval integrations requirements. Watercraft can operate independently to support Army efforts, or they can work in conjunction with Navy and Marine Corps assets. Watercraft

<sup>&</sup>lt;sup>46</sup> US Department of the Army, *Army Training Publication (ATP) 4-15, Army Watercraft Operations* (Washington, DC: Government Printing Office, 2015), v.

can support the full range of unified land operations.<sup>47</sup> With this watercraft capability, the Army needs to consider how it will organize for the likelihood of large scale combat operations beginning in the littorals move seaward to landward. These obstacles to success need reduction before another joint amphibious operation requires both Marine Corps and Army participation.

A singularly important defining factor for the Army meeting the DoD Directives and doctrinal requirements is the measure of time. If given enough time, the Army will not need specific organization or designation of units for amphibious operations. However, this appears to assume that lightly equipped forces, will realize specific successes. For example, a Navy shipborne Army air assault element introduced to a contested area of operation assumes the lightly equipped infantry units will successfully secure a port or airfield capable of accepting ships with Main Battle Tanks and other heavy equipment. Another assumption appears to continue to let the Marine Corps "kick in the door" for follow on forces. The Army states that the "Marine Corps specializes in amphibious assault."<sup>48</sup> While this service specialization is the Title X, DoD Directive, and joint doctrinal method, it does not address an issue of capacity when the Army is shifting their identity towards large scale combat operations, the Army must be expeditionary, which means it must be able to deploy on short notice to austere locations and remain capable of immediately conducting combat operations.<sup>49</sup> If this is true, doctrine must include considerations for short notice amphibious operations when the Marine Corps is geographically dislocated or

<sup>&</sup>lt;sup>47</sup> US Army, ATP 4-15 (2015), 2-2.

<sup>&</sup>lt;sup>48</sup> US Army, *FM 3-0* (2017), 1-125.

<sup>&</sup>lt;sup>49</sup> Ibid., 1-3.

employed in another location across the globe. Alternatively, the Army may need to be amphibious when a conflict is so large that all US ground forces are involved.

#### Section 3: Service Concepts

The outstanding development of this war, in the field of joint undertakings, was the perfection of amphibious operations, the most difficult of all operations in modern warfare.

-Fleet Admiral Ernest King, Official Reports to the Secretary of the Navy

Assume for the moment that China will, one day, close access to the South China Sea. It is safe to state that the South China Sea is vital to the interests of the United States and its allies. Restricting access to the South China Sea disturbs the \$3.4 trillion, or 21 percent, of world trade that transits it each year.<sup>50</sup> Given the littoral nature of the region, if China continues to seek to displace the United States from the Indo-Pacific region, how the United States militarily addresses those threats must have an amphibious capability as an option.<sup>51</sup> Accordingly, both the Army and Marine Corps indicate that China is a military threat and therefore attempt to define military solutions in their concepts.<sup>52</sup>

The Army states, "concepts are ideas for a significant change based on proposed new approaches to the conduct of operations or technology. These ideas propose how the force [Army

<sup>&</sup>lt;sup>50</sup> China Power Project, "How Much Trade Transits the South China Sea?," Center for Strategic & International Studies, last modified August 2, 2017, accessed December 20, 2018, China Power Team. "How much trade transits the South China Sea?" *China Power*. August 2, 2017, updated October 27, 2017, Accessed December 20, 2018. https://chinapower.csis.org/much-trade-transits-south-china-sea/; Ronald O'Rourke, *China's Actions in South and East China Seas: Implications for U.S. Interests: Background and Issues for Congress*, 2018, 5, accessed December 3, 2018, https://www.hsdl.org/?view&did=813476.

<sup>&</sup>lt;sup>51</sup> Donald Trump, *National Security Strategy* (Washington, DC: White House, 2017), 25, accessed November 23, 2018, https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.

<sup>&</sup>lt;sup>52</sup> United States Marine Corps, *Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century* (Washington, DC: Government Printing Office, 2016), 11, 14, 23, accessed November 7, 2018, https://www.mccdc.marines.mil/MOC/; US Department of the Army, TRADOC Pamphlet 525-3-1, *The US Army in Multi-Domain Operations 2028* (Washington, DC: Government Printing Office, 2017), vi-vii, 6-7. Both services directly or indirectly refer to China as a military threat.

units] might do something significantly different in the future, usually 5 to 15 years hence."<sup>53</sup> The Marine Corps similarly states concepts are an, "expression of how something might be done; a visualization of future operations that describes how warfighters, using military art and science, might employ capabilities to meet future challenges and exploit future opportunities."<sup>54</sup> In both services, concepts drive new methods of employing existing assets or express the capability needed in new materiel solutions. Concepts will then either concentrate on an existing problem or a perceived future one. Though, these concepts typically focus inward on addressing deficiencies. All services need to coordinate their concepts to explain how each will prevent gaps in capabilities and capacities and act as a joint team to provide a joint force capable of contending with all challenges or threats to US interests.<sup>55</sup> This section will focus primarily on the integration, or lack thereof, of amphibious operations concepts between the US Army and US Marine Corps.

In contending with China, both services note the maritime domain as an environment that offers unique challenges in reaching the desired end state. With that, multi-service integration improves all five types of amphibious operations.<sup>56</sup> If each service begins their concepts on opposites ends of a known problem of China, both need to meet in the middle to guarantee adequate coverage against deficiencies. How each service explains their role in the amphibious,

<sup>&</sup>lt;sup>53</sup> US Department of the Army, *Army Doctrinal Publication (ADP) 1-01, Doctrine Primer* (Washington, DC: Government Printing Office, 2014), 2-6,

<sup>&</sup>lt;sup>54</sup> United States Marine Corps, *Marine Corps Combat Development Command (MCCDC)/Combat Development and Integration (CD&I) Instruction 5401.1* (Quantico, VA, 2016), 2, accessed December 13, 2018, https://www.mccdc.marines.mil/LinkClick.aspx?fileticket=FqF7m60nRVk%3D&portalid=172.

<sup>&</sup>lt;sup>55</sup> US Department of Defense, Joint Staff, *Doctrine for the Armed Forces of the United States* (Washington, DC: Government Printing Office, 2017), VI-9, accessed December 13, 2018, http://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/seabasing.pdf?ver=2017-12-28-162032-087.

<sup>&</sup>lt;sup>56</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), I-4, II-23.

or maritime environment gives a sense of how complete a concept is across the range of military operations.

A capstone concept describes how an entire service intends to operate now and in the future. Subordinate operating concepts should describe further details for specific missions or Title X responsibilities. At this level of conceptual development is where key areas need to overlap and provide redundancy and account for adequate capacity to the joint force.<sup>57</sup>

The Marine Corps is amphibious and therefore has significant portions of the capstone Marine Corps Operating Concept dedicated to amphibious operations.<sup>58</sup> Their subordinate operating concepts such as Littoral Operations in a Contested Environment (LOCE) and Expeditionary Advance Base Operations (EABO) further address how they will place a renewed emphasis on fighting for and gaining sea control, including employing sea-based and land-based Marine Corps capabilities to support the sea control fight.<sup>59</sup> Throughout both the LOCE and EABO concepts, the use of other assets outside the Navy and Marine Corps are not considered. However, assets do exist in the current joint inventory that may help realize the goals of each concept, at least in the short term. Both concepts introduce ideas on how naval forces could organize, train, and equip to enhance their ability to gain access to and operate in contested littoral environments. These ideas include additional, versatile force options; a broader application of existing doctrine; and a more flexible employment of current, emerging, and potential capabilities.<sup>60</sup> If the Marine Corps had to implement both concepts today, existing Army watercraft could play a central role alongside Marine Corps amphibious vehicles and Navy

<sup>&</sup>lt;sup>57</sup> US Marine Corps, *MCCDC/CD&I Instruction 5401.1* (2016), 2-3, accessed December 13, 2018, https://www.mccdc.marines.mil/LinkClick.aspx?fileticket=FqF7m60nRVk%3D&portalid=172.

<sup>&</sup>lt;sup>58</sup> US Marine Corps, Marine Corps Operating Concept (2016).

<sup>&</sup>lt;sup>59</sup> United States Marine Corps, *Littoral Operations in a Contested Environment(LOCE): Unclassified Edition* (Washington, DC: Government Printing Office, 2017), 3, accessed November 7, 2018, https://www.mccdc.marines.mil/MOC/; Arthur Corbett, "EABO and Stand In Forces, A Discussion on Innovation in Strategy and Concepts" (Quantico, VA, August 7, 2017).

<sup>&</sup>lt;sup>60</sup> US Marine Corps, *LOCE* (2017), 3; Corbett, "EABO and Stand In Forces, A Discussion on Innovation in Strategy and Concepts."

landing craft. However, Army watercraft do not appear to be a part of a solution in either services' need for increased capacity in the littorals. Nevertheless, across the light, medium, and heavy classes of watercraft the Army maintains is an answer to how, if the US military had to fight a LOCE or EABO scenario tonight, they might be successful.

While the Army's primary role is to fight and win land battles, the Army Operating Concept (AOC) does mention the maritime environment on numerous occasions. It further discusses the domains aside from strictly land-based in their subordinate concept. The Multi-Domain Operations (MDO) concept builds on the AOC by specifying how the Army will win against specific threats in other domains.<sup>61</sup> The Multi-Domain concepts mention the maritime environment but do not expand what role the Army will play in it. For example, MDO states,

Converging capabilities . . . in the littoral areas will open physical . . . windows of advantage for naval, air, and ground forces throughout the operational area to maneuver against enemy critical vulnerabilities. The integration of amphibious raids and assaults by naval forces with the maneuver of landward forces in the littorals provides the Joint Force Commander land-based support to defeat sea-denial efforts by enemy forces. EABs [Expeditionary Advance Bases] enable naval, air, and ground operations within days of conflict initiation. Forces establish and execute EAB missions, through occupation or forcible entry, with formations which can conduct and support cross-domain fires in support of sea control and denial, power projection, and sustainment operations.<sup>62</sup>

The only additional mention of the maritime domain is in the required capabilities needed to

make the Multi-Domain concepts a reality. There it states, "supporting actions . . . conduct sea-

<sup>&</sup>lt;sup>61</sup> US Army, *TRADOC Pamphlet 525-3-1*, (2017), vi; US Department of the Army, Multi-Domain Battle: Evolution of Combined Arms for the 21st Century (Washington, DC: Government Printing Office, 2017), i, accessed November 27, 2018,

https://www.tradoc.army.mil/Portals/14/Documents/MDB\_Evolutionfor21st%20(1).pdf. Multi-Domain Operations builds on previous statements from Multi-Domain Battle. Referencing both publications typically gives an accurate indication of what direction the Army intends to go on this topic. A specific citation will be listed. However, the body will refer to these two concepts as "Multi-Domain concepts."

<sup>&</sup>lt;sup>62</sup> US Army, Multi-Domain Battle: Evolution of Combined Arms for the 21st Century, 41.

based inshore maritime raids and amphibious advanced force operations employing low-signature capabilities in support of power projection and littoral maneuver."<sup>63</sup>

It is unclear if the supporting actions are an effort undertaken by the Army or an assumption that other services, Navy or Marine Corps, are expected to acquire these capabilities in support of Army or joint operations. The added concern in these concepts is there is no further mention of how the Army will specifically contribute, with either their maritime assets or land forces, to the efforts of amphibious operations such as raids or establishment of EABs. Therefore, in a future version of the Multi-Domain concepts, there is an opportunity to re-integrate the use of the Army's watercraft into their concepts to enhance further their organic maneuver capabilities. Improved integration of existing maritime assets would also benefit the joint force operating in the littorals by increasing capacity of transport assets for logistical *and maneuver* needs. As with the Army's concepts, the Marine Corps also needs to consider how it will maximize the use of existing assets across the joint force.

The Marine Corps maintains two prominent concepts examining the future of amphibious operations in a contested environment. Between LOCE and EABO, the Marine Corps plans to move in a direction that requires a change in underlying assumptions. For instance, the reliance on the low quantity, yet highly capable amphibious warfare ships to conduct all amphibious operations. While the shift away from irreplaceable assets occurs, consider what is old is new again. The naval, Navy and Marine Corps, concept does not consider the maritime assets of the

<sup>63</sup> Ibid., 56.

Army. Achieving the required tenants of the Inside and Outside Force to in turn realize the full potential of EABO would benefit from what the Army currently maintains.<sup>64</sup>



Figure 7. Inside and Outside Force within Expeditionary Advance Base Operations. "EABO and Stand In Forces, A Discussion on Innovation in Strategy and Concepts" 2017, 19.

History has proven that the Army and Marine Corps team is unbeatable. If the gap in capability integration needs to be crossed now or in the near future, the combination of capabilities residing within the two services will aid in that endeavor. Until the Navy and Marine Corps develop the higher quantity of expendable craft able to persist as an Inside Force, the Army's legacy craft such as the LCU 2000 and LSV will have to accept risk and operate in and outside the adversary's Weapon Engagement Zone (WEZ). Operating inside the WEZ raises a risk to platforms that the

<sup>&</sup>lt;sup>64</sup> Corbett, "EABO and Stand In Forces," 15. The Inside Force is "*designed to persist forward within range of adversary long-range fires*, accept risk, be more passively defended, take advantage of partner proximity, provide Intelligence, Surveillance and Reconnaissance for outside force, be inherently resilient, invert cost imposition, buy time, create enemy uncertainty, etc." The Outside Force "builds on legacy structure and posture to place enemy interests outside the WEZ (Weapons Engagement Zone) at risk in order to deter during *competition* phase or exercise controlled escalation in MCO. Outside forces are outside the WEZ not outside the fight. Can create immediate consequences and highly coercive conditions during MCO (Major Combat Operations)."

Army does not have enough. This risk versus requirement is the same predicament United States' naval forces are in regarding capacity or quantity.

The Army must continue to seek out methods of maneuver. In the amphibious environment, the Army must re-learn how to treat the sea as maneuver space since US adversaries plan to contest it, especially in large scale combat operations beginning, or entirely residing, in the littorals. In the absence of willingness, by either the Army or Marine Corps, to have the Army extend into the maritime domain, future concepts by both services must better indicate how they will integrate. Improved integration will require close coordination in areas often threatened by fiscal constraints. Arguably the most significant requirement needs to be the ability to logistically support the distributed operations inherent in LOCE and EABO. The Army has significant sustainment or logistic capability in the form of their watercraft to potentially do just that.

The questions remain: how will the Marine Corps and Army close a seam between the ideas in their respective concepts? When and how will the Marine Corps arrive in an area versus when and how the Army will follow? In a more complex operation, how will the Army and Marine Corps consider operating together in the littorals during amphibious operations by conducting simultaneous tactical events while aiding an overall strategic aim? While some tenants of each service's concepts overlap, both services must increase their amphibious interoperability to address the current lack of readiness and capacity and provide redundancy across the joint community.

To fight in the near future, the Army and the Marine Corps must engage in dialogue generating joint solutions for the contested portions of the Pacific Ocean. This engagement would reconsider the current interactions between the two services by sharing some of the responsibilities in the littorals in a different manner. The Army would need to interact in the immediate amphibious fight, by preparing to respond in a matter of days vice weeks. The Marine Corps would better integrate *all* existing US military maritime assets into their operational approach. The improved integration would provide a solution now while the purpose-built

28

materiel solutions and mid- and distant-future concepts become a reality. The use of the Army's watercraft in an unusual manner is a viable point of contention for the Army. Utilizing these logistics platforms in a contested area would require acceptance of risk not generally associated with these platforms. Nevertheless, achieving the virtues of mass without the vulnerabilities of concentration that the EABO concept espouses requires an increase in the number of available platforms regardless of service affiliation.<sup>65</sup> Along with capability or multi-service platform integration is the reliance in partnering with other nations to achieve US military end states.

A concern across both services' concepts for combatting threats in the Pacific Ocean is the reliance on local partners for any amphibious operation. Both the Army and Marine Corps place a heavy reliance on partnering with local nations to use regional ports and runways as staging areas. This reliance cannot be solely depended upon. Known ports offer better infrastructure for the same reason they also offer themselves as better targets. Choosing random and austere locations, potentially within the adversary's span of control, to temporarily create these same support capabilities adds a benefit of surprise and unpredictability. However, if an operation requires multiple, widely separated locations from which to control portions of the littorals, then a higher quantity of landing craft could greatly benefit any effort.

# Section 4: Materiel Solutions

Ship-to-shore connectors move personnel, equipment, and supplies, maneuvering from a sea base to the objective. These are critical enablers for any naval force by closing the last "tactical mile" with the adversary.

—LtGen Robert Walsh, Deputy Commandant Combat Development and Integration, Statement of Assistant Secretary of the Navy for Research, Development, and Acquisition and Deputy Commandant, Combat Development and Integration and Deputy Chief of Naval Operations for Warfare Systems before the Subcommittee on Seapower and Projection Forces of the House Armed Services Committee 2018

<sup>&</sup>lt;sup>65</sup> Corbett, "EABO and Stand In Forces" (2017), 17. The EABO concept looks to future autonomous platforms to increase quantity. Those platforms are not currently in the DoD inventory for mass use.

Consider the Grand Canyon in Arizona. It has immense open expanses that are highly difficult to cross from one side to the other. In the 1890s, when the Grand Canyon first became a protected site, it was more difficult to cross than today. There were multiple options open to a person or group needing to contend with the multi-faceted challenge of getting from one side to the other. Climbing down to the canyon floor and back up the other side, or building a bridge across to name a couple. Crossing this physical gap is similar to how current and future materiel solutions could fill a capability and capacity gap more substantial than the Grand Canyon in the Pacific Ocean. In a continuum of large, medium, and small carrying capacity or long, mid, or short range, the US Navy brings the small landing craft and large amphibious warfare ships to any operation. Today, US Army watercraft can fill the medium capacity and mid-range gap to get across the world's oceans. To more efficiently do so in the future requires not just coordination between the Marine Corps and Navy, but with the Army as well.



Figure 8. US Navy and US Army Continuum of Watercraft and Ships. Created by author.

Nearly all forms of amphibious operations require the use of landing craft, also known as surface connectors, to successfully complete assigned missions. <sup>66</sup> In Normandy, troops and equipment loaded into Landing Crafts, Vehicle, Personnel (LCVP), also known as Higgins boats,

<sup>&</sup>lt;sup>66</sup> For this monograph, Surface Connectors are synonymous with Landing Craft. The terms are largely interchangeable within Headquarters, United States Marine Corps, and congressional testimony discussing the associated Program of Record (POR).

for the final leg of the amphibious landings. Today, the Army and Navy deliver troops and equipment ashore by way of the Higgins boat's modern counterparts. All landing craft have the common characteristics of being able to carry troops and equipment for beaching, unloading, retracting, and resupply operations from sea to shore.<sup>67</sup> The Marine Corps primarily relies on the Navy to maintain landing craft to transport personnel, equipment, and supplies within the amphibious operations area; they enable maneuver.<sup>68</sup>

The two primary landing craft within the Navy's inventory is the Landing Craft, Air Cushion (LCAC) and the Landing Craft, Utility (LCU) 1600.



Figure 9. Comparison of US Navy Landing Craft, current and replacement. Created by author. Photos and graphics owned by the US Navy.

<sup>&</sup>lt;sup>67</sup> US Joint Staff, DOD Dictionary of Military and Associated Terms, 139.

<sup>&</sup>lt;sup>68</sup> US Department of the Navy, United States Marine Corps, *Maritime Expeditionary Warfare Annual Report* (Quantico, VA: Deputy Commandant, Combat Development and Integration, 2018), 24.

The Navy landing craft and amphibious warfare ships have a symbiotic relationship because without a pier the Marine Corps' heavy equipment, such as the M1A1 Main Battle Tank, cannot otherwise get ashore. Without the well decks on the amphibious warfare ships, the landing craft cannot get to the required theater to conduct operations in conventional, non-distributed operations. This relationship works well to provide command and control, logistics support, and transportation assets for the Marine Corps to introduce a landing force ashore. This introduction of a landing force occurs whether in a contested environment or for other amphibious operations such as humanitarian aid or disaster response. Capability gaps exist when operating from a seabase, expeditionary advanced base, or friendly port.

Landing craft are critical enablers and are a vital component of the naval expeditionary capability to execute ship-to-objective maneuver. However, decreased readiness and operational capability in the aging landing craft fleet has been a prevalent trend for at least the last nine years.<sup>69</sup> The Navy currently maintains a new acquisition Program of Record (POR) for both of their primary landing craft. The Ship to Shore Connector program's LCAC 100 will replace the current LCAC and the LCU 1700 will replace LCU 1600. While Navy landing craft will continue to play vital roles in the United States' method of conducting amphibious operations, including the Army's landing craft capabilities will better position the DoD to address emerging threats in the maritime domain.

That previously mentioned gap gets deeper and broader due to the current readiness and capacity of the US Navy's amphibious warfare ships.

The Department of the Navy [DoN] lacks a sufficient number of amphibious and expeditionary ships to execute current operations, respond to contingency operations, and conduct the necessary training for both simultaneously. Ideally, the Naval Service would have optimally trained and equipped amphibious forces that deploy when required, with the right quantity of quality forces, on the designated timeline, with a reservoir of non-deployed yet ready forces that could surge to meet the demands of large scale

<sup>&</sup>lt;sup>69</sup> US Navy, Maritime Expeditionary Warfare Annual Report, 7.

contingencies. However, today the operational availability of the amphibious fleet is insufficient to meet the global demands and consequently increases risk.<sup>70</sup>

The US Navy, in support of Marine Corps amphibious operations, requires thirty-eight amphibious warfare ships. This quantity of ships, along with the requisite landing craft, supports two full Marine Expeditionary Brigades deploying to two separate locations with sustainment for up to thirty days. However, the actual current number of ships based off total quantity minus those in maintenance reduces the current available amphibious lift closer to that of one MEB. With the Navy only having thirty-four amphibious warfare ships, the ability to support a large scale amphibious operation or multiple simultaneous operations is at significant risk.<sup>71</sup>

The Army, although not widely known today, used watercraft to land men and materiel since the Revolutionary War. The Army views the Navy and Marine Corps as having an amphibious capability that is a small package designed for limited sustainment. The Army also views the Marine Corps as able to only gain a foothold or conduct limited operations at the beginning of a deployment. Following Marine Corps amphibious operations, the Navy may not be available to support land-based Army operations. Therefore, the Army states it has historically conducted large scale and fully sustained amphibious operations.<sup>72</sup> Two prevalent landing craft in the Army's current inventory is the Landing Craft, Utility 2000 (LCU 2000) and the Logistics Support Vessel (LSV). Neither vessel is organic to an amphibious force. However, both can be used to support all five types of amphibious operations directly. Both are self-deployable which is a feature that could be utilized for distributed operations across the breadth and depth of the

<sup>&</sup>lt;sup>70</sup> US Congress, House Armed Service Committee, Subcommittee on Readiness, Statement of Lieutenant General Brian D. Beaudreault Deputy Commandant Plans, Policies, And Operations On Amphibious Warfare Readiness And Training – Interoperability, Shortfalls, And The Way Ahead, Statement (Washington, DC, December 1, 2017), 3-4, accessed December 13, 2018, https://docs.house.gov/meetings/AS/AS03/20171201/106681/HHRG-115-AS03-Wstate-BeaudreaultB-20171201.pdf.

<sup>&</sup>lt;sup>71</sup> US Navy, Maritime Expeditionary Warfare Annual Report, 11.

<sup>&</sup>lt;sup>72</sup> US Army, *ATP 4-15*, (2015), 4-24.

Pacific Ocean alongside Navy ships and other watercraft.<sup>73</sup> An upcoming Army landing craft is the Maneuver Support Vessel, Light (MSV(L)). As the name indicates, once it enters the fleet of Army watercraft, it will be able to support maneuver ashore by treating the sea as a maneuver space similar to how the Navy's landing craft currently operate. Once fielded, the MSV (L) will provide intra-theater transportation of personnel and materiel, delivering cargo from advanced bases and deep-draft strategic sealift ships to harbors, remote and unimproved beaches and coastlines, and degraded ports; capabilities similar to Navy landing craft.<sup>74</sup>



Figure 10. Army Landing Craft. Created by author. Photos and graphics from US Army. Derived from Michael D. Clow, "Army maneuvers new watercraft program to award" September 29, 2017, accessed December 4, 2018,

https://www.army.mil/article/194591/army\_maneuvers\_new\_watercraft\_program\_to\_award; United States Marine Corps, Maritime Expeditionary Warfare Annual Report (Quantico, VA, 2018), 28, accessed September 18, 2018,

https://www.mccdc.marines.mil/Units/Seabasing/Annual-Report/. Photos owned by the US Army and US Navy.

Combining the capabilities and capacities of the LCACs, LCU 1600s, LCU 2000s, and

the LSVs would allow the joint force to more ably conduct seabasing, ship-to-shore movement,

afloat forward staging, and JFE. The characteristics of each landing craft complement each other.

The LCAC's ability to carry a relatively small payload a short distance complements the LCU

<sup>&</sup>lt;sup>73</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), III-22.

<sup>&</sup>lt;sup>74</sup> Michael Clow, "Army Maneuvers New Watercraft Program to Award," Army.Mil, last modified September 29, 2017, accessed January 29, 2019,

https://www.army.mil/article/194591/army\_maneuvers\_new\_watercraft\_program\_to\_award.

1600's ability to carry a load over twice the size for over ten times the distance; albeit much slower. However, both Navy landing craft require a nearby port or amphibious warfare ship's well deck from which to operate. The Army brings intra-theater lift capability to any operation. Combining the Navy's landing craft capabilities with the Army's provide a level of amphibious integration intended by the DoD, as referred in JP 3-02. If fielded in sufficient quantity, as determined by the Army, the MSV (L) will provide a shallow draft beachable landing craft capable of transporting heavy equipment. Yet, the question exists as to whether this new maritime asset will be interoperable with the Navy's amphibious warfare ships. Enhanced integration between Army watercraft, Marine Corps amphibious vehicles, and Navy amphibious warfare ships only serve to improve the overall ability for the US military to conduct amphibious operations successfully.

### Section 5: Conclusion

I also predict large-scale amphibious operations such as those that occurred at Sicily and Normandy will never occur again . . .

But it . . . should have taught all military men that our military forces are one team, in the game to win regardless of who carries the ball.

-GEN Omar Bradley, Armed Services Committee of the House of Representatives Testimony Amphibious operations will continue to be a viable method of maintaining US interests abroad. While not universally a large scale assault every time, amphibious operations are routine to global combatant command activities. From uncontested Humanitarian Aid efforts to large scale combat operations in the form of a Joint Forcible Entry, the Army could play an essential role in nearly all parts of amphibious operations.



Figure 11. Amphibious Operations, Historical Usage Since 1990. Headquarters Marine Corps, Deputy Commandant, Combat Development and Integration, 2016.

Since adversaries of the United States can significantly contest the seaward portion of the littorals from land, the US Army must incorporate the littorals into their doctrine and concepts. The Army must define how it will organize if faced with an amphibious problem an individual service, alongside the Marine Corps, or immediately following a Marine Corps operation.

It appears that the DoD is willing to accept more risk than historical precedence would advise when it comes to maintaining amphibious capabilities and capacities. The majority of gaps and disparities found in this study identify a need that may never come to fruition. While not addressing the issues of doctrinal, conceptual, and materiel gaps presented may appear to offer a low amount of risk to the DoD, it will quickly elevate operational risk if a large-scale conventional conflict occurs that originates in the littorals.

Additional areas of study to further this discussion include determining the United States Air Force's role in amphibious operations. Joint Forcible Entry Operations originating from the sea includes the Air Force as a vital component for success. A look at the rest of the DOTMLPF; training, leadership, personnel, and facilities; would also broaden this topic. Another area worth exploring is the budgetary trends within each service and Department for amphibious assets. How well PORs related to amphibious operations compete against other programs for funding approval may build a better understanding of the joint amphibious ability.

Navy landing craft continue to play vital roles in the United States' method of conducting amphibious operations. Including the Army's landing craft into plans and operations will improve the DoD's ability to combat adversaries in the maritime domain. If this is the case, the Army and Marine Corps must work more closely to ensure they incorporate each other's amphibious capabilities into current exercises and future concepts. This incorporation would ensure each service understands current tactics, techniques, and procedures as joint doctrine intends to more adequately address strategic concerns.

If the Army desires to continue conducting amphibious operations, as directed by the DoD, it must incorporate its watercraft into exercises that enable not just sustainment, but maneuver of tactical units as well. However, the Army appears to be moving in the opposite direction. Between May 2018 and January 2019, the Army has indicated a desire to divest itself of landing craft platforms.<sup>75</sup> Reducing the Army's ability to transport large amounts of tactical vehicles within the littorals will jeopardize its ability to introduce sufficient forces into a theater

<sup>&</sup>lt;sup>75</sup> Colin Clark, "Army AMC Head Wants To Stop Buying Ships," *Breaking Defense*, last modified May 24, 2018, accessed May 25, 2018, https://breakingdefense.com/2018/05/army-amc-head-wants-to-stop-buying-ships/; Joseph Trevithick, "The U.S. Army May Cut Nearly Half Of Its Already Underappreciated Naval Fleet," *The Drive*, last modified January 19, 2019, accessed January 22, 2019, http://www.thedrive.com/the-war-zone/26093/the-u-s-army-may-cut-nearly-half-of-its-already-underappreciated-naval-fleet.

via the littorals for large scale combat operations. The Army needs to change its current direction. Instead of divesting itself of a significant percentage of its watercraft, it should consider increasing the quantity of LSVs and protect the planned initial quantity of the upcoming MSV(L).

The Marine Corps, and subsequently the rest of the DoD, would benefit from formal, service level agreements with the Army to use Army watercraft for the full range of amphibious operations. These agreements would add additional validity to the materiel existence of Army watercraft while providing independently deployable, medium to large scale, landing craft to the Marine Corps. Formal agreements between the services would expand the surface lift capacity available to the Marine Corps and further justify the existence of landing craft, that happens to reside in the Army, in the DoD's inventory.

The disparities between joint and service level doctrine, the lack of external service integration in future concepts, and the ownership and capability of landing craft across the DoD inventory indicate a need to improve interoperability and integration across service departments. While any one of the concerns listed here could make the applicable service nervous, the discomfort needs to be weighed against whether the joint nature of the fight is appropriately addressed. A DoN solution may better benefit from a joint effort which includes the Army's watercraft as an integral part. Provided the Marine Corps fully embraces its amphibious roots, an Army amphibious capacity will not threaten the Marine Corps' existence. To ensure this, the Marine Corps must further strengthen its bonds with the Navy. This can be exemplified in agreements between the Naval services to protect the PORs that are amphibious in nature. These include not just the landing craft, but the amphibious warfare ships and all other associated programs. While this occurs, the US Army can still aid the joint effort to dominate the littorals with their amphibious assets.

The findings of this study also indicate another argument. With a lack of specific amphibious organization, a lack of concept addressing the maritime domain, and/or a lack of specific amphibious materiel capability, the Army must realize that it relies solely on another

38

service, the US Marine Corps, to begin some versions of its driving form of combat, Large Scale Combat Operations. If the services desire to be innovative, it may not require new, futuristic, technology. It may merely require new methods of thinking about old challenges to coordination and integration.

#### Appendix 1: Definitions and Amphibious Phases

## Definitions

Amphibious Assault. An amphibious assault involves the establishment of an LF on a hostile or potentially hostile shore. The organic capabilities of AFs, including air and fire support, logistics, and mobility, allow them to gain access to an area by forcible entry. The salient requirement of an amphibious assault is the necessity for swift introduction of sufficient combat power ashore to accomplish AF objectives. 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 adversaries.

Amphibious Demonstration. An amphibious demonstration is a show of force where a decision is not sought and no contact with the adversary is intended. A demonstration's intent is to deceive the adversary, causing the adversary to select an unfavorable course of action (COA). For the JFC, an amphibious demonstration may serve as a supporting operation in a campaign in order 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.

Amphibious Raid. An amphibious raid is a type of amphibious operation involving swift incursion into or temporary occupation of an objective followed by a planned withdrawal. Amphibious raids may be conducted to temporarily seize an area in order to secure information, confuse an adversary, capture personnel or equipment, or to destroy a capability. They may also

40

be executed in conjunction with a larger JFC mission to defeat specific enemy centers of gravity (COGs).

Amphibious Support to Crisis Response and Other Operations. A type of amphibious operation that contributes to conflict prevention and crisis mitigation. AFs routinely conduct amphibious operations in response to crises and support to other operations such as: security cooperation, foreign humanitarian assistance (FHA) (to include disaster relief), noncombatant evacuation operations (NEOs), peace operations, or recovery operations.

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.<sup>76</sup>

Amphibious Operation. 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.<sup>77</sup>

Littorals. Littorals have two segments. The first is seaward, the area from the open ocean to the shore, which must be controlled to support operations ashore. The landward portion of a

<sup>&</sup>lt;sup>76</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), I-2-3.

<sup>&</sup>lt;sup>77</sup> Ibid., I-1.

littoral is the area inland from the shore that can be supported and defended directly from the sea.<sup>78</sup>

Landing Force. A Landing Force (LF) is a Marine Corps or Army task organization formed to conduct amphibious operations.<sup>79</sup>

# **Amphibious Phases**

Regardless of specific type, every amphibious operation is broken down into separate phases captured in the acronym PERMA which stands for planning, embarkation, rehearsal, movement, and action.

#### 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

<sup>&</sup>lt;sup>78</sup> US Joint Staff, DOD Dictionary of Military and Associated Terms (2018), 142.

<sup>&</sup>lt;sup>79</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), I-1.

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. Provide time for all echelons to become familiar with plans. Test communications and information systems. 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.<sup>80</sup>

<sup>&</sup>lt;sup>80</sup> US Joint Staff, JP 3-02, Amphibious Operations (2014), I-5.

# Bibliography

- China Power Project. "How Much Trade Transits the South China Sea?" Center for Strategic & International Studies. Last modified August 2, 2017. Accessed December 20, 2018. China Power Team. "How much trade transits the South China Sea?" China Power. August 2, 2017. Updated October 27, 2017. Accessed December 20, 2018. https://chinapower.csis.org/much-trade-transits-south-china-sea/.
- Clark, Colin. "Army AMC Head Wants To Stop Buying Ships." *Breaking Defense*. Last modified May 24, 2018. Accessed May 25, 2018. https://breakingdefense.com/2018/05/army-amchead-wants-to-stop-buying-ships/.
- Clow, Michael. "Army Maneuvers New Watercraft Program to Award." Army.Mil. Last modified September 29, 2017. Accessed January 29, 2019. https://www.army.mil/article/194591/army\_maneuvers\_new\_watercraft\_program\_to\_aw ard.
- Corbett, Arthur. "EABO and Stand In Forces, A Discussion on Innovation in Strategy and Concepts," Quantico, VA, August 7, 2017.
- Dupuy, R. Ernest, and Trevor N. Dupuy. *The Harper Encyclopedia of Military History: From* 3500 BC to the Present. 4th ed. New York, NY: HarperCollins, 1993.
- Field, Jacob F. D-Day in Numbers. London, England: Michael O'Mara Books Unlimited, 2014.
- Fischer, David Hackett. *Washington's Crossing*. Pivotal moments in American history. Oxford: Oxford Univ. Press, 2006.
- Fursenko, Aleksandr A., and Timothy J. Naftali. One Hell of a Gamble: Khrushchev, Castro, and Kennedy, 1958 - 1964. Paperback ed. New York: Norton, 1998.
- Garas, Daniel. "The 40th Anniversary, Commissioning of USS Dwight D. Eisenhower (CVN-69)." *The Sextant, Naval History and Heritage Command*. Last modified October 17, 2017. Accessed November 21, 2018. http://usnhistory.navylive.dodlive.mil/2017/10/17/the-40th-anniversary-commissioning-of-uss-dwight-d-eisenhower-cvn-69/.
- Hill, William. "One of Those Little-Known Cold War Adventures," 2016. United States Army Transportation Corps. Accessed December 11, 2018. http://www.transportation.army.mil/historian/documents/barc.pdf.
- Killblane, Richard. "159th Transportation Battalion (Boat) (Terminal)." United States Army Transportation Corps. Accessed November 29, 2018. http://www.transportation.army.mil/history/documents/159th%20Term%20Bn.pdf.

- O'Rourke, Ronald. China's Actions in South and East China Seas: Implications for U.S. Interests: Background and Issues for Congress, 2018. Accessed December 3, 2018. https://www.hsdl.org/?view&did=813476.
- Trevithick, Joseph. "The U.S. Army May Cut Nearly Half Of Its Already Underappreciated Naval Fleet." *The Drive*. Last modified January 19, 2019. Accessed January 22, 2019. http://www.thedrive.com/the-war-zone/26093/the-u-s-army-may-cut-nearly-half-of-itsalready-underappreciated-naval-fleet.
- Trump, Donald. National Security Strategy. Washington, DC: White House, 2017. Accessed November 23, 2018. https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.
- United Nations, Mission in Haiti. *Haiti After Action Review*. After Action Review. Vienna, Austria: United Nations, March 1, 1996.
- US Marine Corps. *Littoral Operations in a Contested Environment: Unclassified Edition.* Washington, DC: Government Printing Office, 2017. Accessed November 7, 2018. https://www.mccdc.marines.mil/MOC/.
- Marine Corps Combat Development Command/Combat Development and Integration Instruction 5401.1. Quantico, VA, 2016. Accessed December 13, 2018. https://www.mccdc.marines.mil/LinkClick.aspx?fileticket=FqF7m60nRVk%3D&portali d=172.
  - —. Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century. Washington, DC: Government Printing Office, 2016. Accessed November 7, 2018. https://www.mccdc.marines.mil/MOC/.
  - -----. *Maritime Expeditionary Warfare Annual Report*. Quantico, VA, 2018. Accessed September 18, 2018. https://www.mccdc.marines.mil/Units/Seabasing/Annual-Report/.
- US Atlantic Command. *Operation Uphold Democracy: US Forces in Haiti*. Washington, DC: OC Incorporated, 1997.
- US Congress, House Armed Service Committee, Subcommittee on Readiness. Statement of Lieutenant General Brian D. Beaudreault Deputy Commandant Plans, Policies, And Operations On Amphibious Warfare Readiness And Training – Interoperability, Shortfalls, And The Way Ahead. Statement. Washington, DC, December 1, 2017. Accessed December 13, 2018. https://docs.house.gov/meetings/AS/AS03/20171201/106681/HHRG-115-AS03-Wstate-BeaudreaultB-20171201.pdf.
- US Department of Defense. Department of Defense Directive (DODD) 5100.01, Functions of the Department of Defense and Its Major Components. Washington, DC: Government Printing Office, 2010.
- US Department of Defense, Joint Chiefs of Staff. Department of Defense Dictionary of Military and Associated Terms (JCS Pub 1). Washington, DC: Government Printing Office, 1984.

- US Department of Defense, Joint Staff. *Doctrine for the Armed Forces of the United States*. Washington, DC: Government Printing Office, 2017. Accessed December 13, 2018. http://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/seabasing.pdf?ver=2017-12-28-162032-087.
- ------. DOD Dictionary of Military and Associated Terms. Washington, DC: Government Printing Office, 2018.
- *———. Joint Publication 3-02, Amphibious Operations.* Washington, DC: Government Printing Office, 2014.
- ------. Joint Publication 3-18, Joint Forcible Entry Operations. Washington, DC: Government Printing Office, 2018.
- US Department of the Army. Army Doctrinal Publication (ADP) 1-01, Doctrine Primer. Washington, DC: Government Printing Office, 2014.
  - —. Army Doctrinal Reference Publication (ADRP) 1-02, Terms and Military Symbols. Washington, DC: Government Printing Office, 2016.
  - ------. Army Doctrinal Reference Publication (ADRP) 3-0, Operations. Washington, DC: Government Printing Office, 2017.
  - ——. *Army Training Publication (ATP) 4-15, Army Watercraft Operations*. Washington, DC: Government Printing Office, 2015.
    - —. Army Training Publication (ATP) 4-94, Theater Sustainment. Washington, DC: Government Printing Office, 2013.
  - ———. "Blood and Steel: History, Customs, and Traditions of the 3d Cavalry Regiment." 3rd Cavalry Regiment. Last modified 2018. Accessed October 31, 2018. http://www.hood.army.mil/3D\_CR/files/pdfs/BloodandSteel2018.pdf.
  - ------. Field Manual (FM) 3-0, Operations. Washington, DC: Government Printing Office, 2017.
  - —. *Field Manual (FM) 31-12, Army Force in Amphibious Operations*. Washington, DC: Government Printing Office, 1961.
  - ——. Field Manual (FM) 34-35, Armored Cavalry Regiment and Separate Brigade Intelligence and Electronic Warfare Operations. Washington, DC: Government Printing Office, 1990.

—. Multi-Domain Battle: Evolution of Combined Arms for the 21st Century. Washington, DC: Government Printing Office, 2017. Accessed November 27, 2018. https://www.tradoc.army.mil/Portals/14/Documents/MDB\_Evolutionfor21st%20(1).pdf. -. *TRADOC Pamphlet 525-3-1, The US Army in Multi-Domain Operations 2028.* Washington, DC: Government Printing Office, 2017.

- US Department of the Navy, US Marine Corps. Marine Corps Doctrinal Publication (MCDP) 1-0, Marine Corps Operations. Washington, DC: Government Printing Office, 2017.
- US State Department, Office of the Historian. "Intervention in Haiti, 1994-1995." *Milestones in the History of U.S. Foreign Relations: 1993-2000.* Accessed December 11, 2018. https://history.state.gov/milestones/1993-2000/haiti.