

OPERATION TORCH: PROJECTING COMBAT POWER OVER THE SHORE

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
Military History

by

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2022

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REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY) 10-06-2022		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) AUG 2021 – JUN 2022	
4. TITLE AND SUBTITLE Operation Torch: Projecting Combat Power Over the Shore				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Christopher Ryan Jacobs				5d. PROJECT NUMBER	
				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. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT While the Allied landings in North Africa in November 1942 were eventually successful, the lack of preparation before World War II for amphibious operations prolonged Operation Torch longer than was necessary. Between the Spanish American War and the outbreak of World War II, the United States military advanced its doctrine, training, organization, and equipment, but failed to apply sufficient emphasis on sustainment support to project large mechanized forces over the shore. During the 1920s and 1930s the Army, the Navy, and the Marine Corps conducted training, many times jointly, but did not resource the exercises to an adequate scale to validate doctrine, support organizations, and equipment to sustain the force. Neglecting to integrate these factors together before the war led to rushed and incomplete advancements during mobilization in early 1942 and limited the operational reach of the United States military during Operation Torch.					
15. SUBJECT TERMS Amphibious Operations, Operation Torch, Engineer Amphibian Brigade, Amphibious Doctrine, Fleet Landing Exercises, Over the Shore Operations, .					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)
			(U)	109	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

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ABSTRACT

OPERATION TORCH: PROJECTING COMBAT POWER OVER THE SHORE, by Christopher R. Jacobs, 109 pages.

While the Allied landings in North Africa in November 1942 were eventually successful, the lack of preparation before World War II for amphibious operations prolonged Operation Torch longer than was necessary. Between the Spanish American War and the outbreak of World War II, the United States military advanced its doctrine, training, organization, and equipment, but failed to apply sufficient emphasis on sustainment support to project large mechanized forces over the shore. During the 1920s and 1930s the Army, the Navy, and the Marine Corps conducted training, many times jointly, but did not resource the exercises to an adequate scale to validate doctrine, support organizations, and equipment to sustain the force. Neglecting to integrate these factors together before the war led to rushed and incomplete advancements during mobilization in early 1942 and limited the operational reach of the United States military during Operation Torch.

ACKNOWLEDGMENTS

First and foremost, I would like to thank my family for the support during this process. The long days and the weekend sessions at the library took a lot of time away from you that should have been yours. Thank you Madi for everything you do for our family and thank you Cooper and Carter for always being ready to brighten the day.

Thank you to all the instructors who encouraged me to stick with the process throughout the year. It really has been a rewarding journey and I improved in ways I did not expect.

LTC Nance, Dr. Cotter, and Mr. Williams thank you for helping me through the process of writing this paper. I know my rough drafts were very rough and full of present tense, but I feel I became a much better writer because of the journey. Thank you for guiding me onto the target more than once. Your comments and guidance really forced me to change how I think through very complex ideas and arguments. Thank you all.

Thanks to all the other MMAS writers out there, especially Cam and Manny. A221 might have been the most useful course at CGSC, and it was your dedication to providing really detailed feedback that allowed that. Thank you Dr. Able, Dr. Hosler, Dr. Brown, and Dr. Kautt for the assistance as well. Thank you Ms. Chapman; you are the quiet professional in the background that helps more than you probably know.

I would also like to thank the Combined Arms Research Library staff. Ms. Dubuisson and rest of the archive staff, thank you for all your help.

Finally, I would like to thank staff group 5B. You had to listen to my rants about Operation Torch one too many times. Thanks for being such a great staff group.

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ACRONYMS

AGF	Army Ground Forces
ASF	Army Service Forces
CTF	Center Task Force
ETF	Eastern Task Force
WTF	Western Task Force

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CHAPTER 1

INTRODUCTION

There are few military operations that are more challenging and complex than amphibious landings. The transition of military forces from the sea to the land is complicated by not only diverse and challenging natural landscapes but also the transitions between traditional military services and commands. In the case of the American military during World War II, successful landing operations required the synchronization and cooperation between the Army and the Navy, and at times the Marine Corps. In one of the first major landing operations of the war, the American military landed on the shores of North Africa as part of Operation Torch in November 1942.

Eventually, the operation would be a success for the allied nations, but the early portion was plagued by issues with operational reach because of poor preparedness to conduct over-the-shore operations by the American military. The lack of operational reach was a result of insufficient development and synchronization of doctrine, organizations, materials, and training from the end of the Spanish American War through the First World War and to World War II. The relationship between these factors was not fully appreciated by the services before the war and through Operation Torch many lessons were learned that should have been learned and corrected during the interwar years of the 1920s and 1930s.

A significant number of works are dedicated to the battles, leaders, and military forces of Operation Torch; however, many look at a single aspect and tell only a narrow part of the story contributing to the landings. The Torch landings were an audacious and

complicated operation for the United States' opening campaign of the war in the European Theater. The landings consisted of three different task forces from two different nations, multiple services, and spread across nearly 1200 miles of coastline. It was also the first major test of new weapons and doctrine developed during the interwar years by the United States military.¹ These factors combined with the inherent complexities of landing operations provide significant historical lessons about ship to shore and over-the-shore operations.

Military forces have been landing on enemy shores for centuries, but the American experience was rather limited before World War II. General Ulysses Grant's landing at the Battle of Vicksburg is one of the first applications of the industrial revolution to large scale landing operations within the American military experience. Forty-five years later, the American military conducted numerous landings during the Spanish American War in both the Caribbean and the Pacific. The initial landings in Cuba during that conflict were poorly executed and demonstrate the significant challenges facing modern armies attempting to project combat power onto distant shores. In one account of landings near Daiquiri and Siboney, Cuba, insufficient small boats were available, and troops jumped overboard and swam to shore. No planning for the landing of pack animals or supplies was done which resulted in horses being pushed overboard and many drowning in the sea. Cavalry forces with no horses or supplies became light infantry forces and the greater land campaign was delayed allowing Cubans

¹ William Atwater, *United States Army and Navy Development of Joint Landing Operations: 1898-1942* (Durham, NC: Duke University, 1986), 180.

to prepare defensive positions.² David Nasca captures the essence of the experiences from the Spanish American War when he wrote that the landing operations were “really still an ad hoc operation that depended on luck and leadership.”³ The operations in the Caribbean provided hard lessons for the American military in joint operations between the Army and the Navy and the need to adjust for the changes in the character of modern warfare.

European forces conducted various landings during World War I with mixed results, most famously the British disaster at Gallipoli. Beginning on the 25th of April 1915 the landing was an immediate disaster. The Allied forces counted on surprise and mass to quickly move off the beaches and secure objectives inland. The Turkish defenders however pinned down most of the combat power on the beach and dug defensive trenches preventing any breakout by the Allied forces. Many observations after the campaign focused on the ineffective naval gunfire support, but more important was the inability to logistically support the operation. Large landing craft were in short supply and prevented heavy artillery and bulk supplies from being brought ashore promptly. The effects of the Industrial Revolution that caused trench warfare to persist on the western front in France were also revealed on the beaches of Gallipoli. To make landing operations possible in the future, militaries realized that they would need to develop doctrine, landing craft, and organizations suitable to sustain modern heavy forces.⁴ The

² David Nasca, *The Emergence of American Amphibious Warfare: 1898-1945* (Annapolis, MD: Naval Institute Press, 2020), 36.

³ Ibid., 35.

⁴ Ibid., 92-94.

lessons of these operations directly influenced to the activities of the United States military during the interwar years, and the preparedness to conduct operations in North Africa.

The Army and the Navy both examined the problems of landing operations from World War I during the interwar years and went on to develop doctrine, conduct joint training, and procure landing craft that were vital to the limited readiness that did exist by 1941. While the activities the American military undertook during this time had limited success, the fundamental building blocks established were essential for the rapid mobilization in 1942. The after-action reports of the few joint training events during the period contained repetitive comments from umpires and observers about the deficiencies of the joint force's doctrine, materials, and training with minimal improvements between iterations. The lack of scale was noticeable during almost all of the training exercises conducted between the Army and the Navy, which limited the development of over-the-shore logistical operations. Each training event, however, built a greater understanding of amphibious operations before World War II.

After the outbreak of the war, the Arcadia Conference held between the British and American governments in the last week of December 1941 set the strategy of the allied war effort and laid the foundation for Operation Torch. To ensure that Russia remained in the war against Germany, the Allies agreed to open a second front in Europe. Throughout the spring of 1942, allied planners debated direct assaults into mainland Europe or indirect approaches through Africa and the Mediterranean. National leaders

eventually decided to execute Operation Torch in July 1942.⁵ Planning for Torch was conducted throughout the summer of 1942 with the final plans issued in October only weeks before the operation commenced. In an impressive display of commitment, the allies progressed from initial planning to execution in just three months.

In the rushed effort to prepare and execute Operation Torch, significant details needed to project combat power over the shore and into Northern Africa were neglected. Plans for the assault force to cross the beach along with plans for the initial objectives were of most concern to commanders; however, plans for sustainment and follow-on forces were inadequate. To fully understand the impacts of these decisions and oversights a thorough examination of prewar preparations in doctrine, training, organizations, and planning must be undertaken. By holistically looking at the activities of the military services, the reasons for the lack of preparedness of the joint force becomes clearer.

Significant primary and secondary sources are available to analyze the landing operations in North Africa. Publications from the Center of Military History provide details of events from strategic planning to tactical problems. George Howe's work in *Northwest Africa: Seizing the Initiative in the West* provides the bedrock of the background information for this work. His volume supplies detailed information about the landings and the operation as a whole.⁶ The Center for Military History also provides

⁵ Maurice Matloff and Edwin Snell, *Strategic Planning for Coalition Warfare: 1941-1942*, United States Army in World War II: The War Department (Washington, DC: Center of Military History, United States Army, 1999), 99.

⁶ George F. Howe, *Northwest Africa: Seizing the Initiative in the West*, United States Army in World War II: The Mediterranean Theater of Operations (Washington, DC: Center of Military History, United States Army, 1993).

volumes on strategic planning, engineer operations, transportation corps, and quartermaster functions that are vital to understanding how the interrelation of these planning functions and technical services contributed to the operation. It is the combination of all these technical services (engineers, quartermaster, ordnance, transportation) and planning functions which made the landing operations in North Africa so difficult.

The greatest complexity of landing operations may not be the transition from the sea to the land, but rather the Navy to the Army. There is no simple answer to the effect of interservice rivalries during the interwar years and at Operation Torch. Before the war rivalries between services, and even among leaders within the same services did affect the readiness of the United States to embark on amphibious operations. However, the effect of interservice rivalries during the execution of Operation Torch are likely over-emphasized in most works with even George Patton saying “that the relations between the Army and Navy in this convoy could not possibly be more satisfactory.”⁷ The shifting character of war to joint operations makes the examination of both services’ actions of vital importance to truly understand Operation Torch.

When thinking of operations in North Africa it is easy to drift to visions of great tank battles and Army operations, but the story of the Navy from 1902 to 1942 is vitally important. *The Amphibians Came to Conquer* by George Dyer provides a detailed and important account of Admiral Richmond Kelly Turner who served as the chief of the

⁷ Martin Blumenson and George Patton, *The Patton Papers* (Boston: Houghton Mifflin: 1972), 100. Letter from MG George Patton to GEN Marshall on 6 November 1942.

Navy's war plans division from 1940 to 1941, and his contributions to improve amphibious capabilities during the mobilization of the American military. Dyer's examination of Admiral Turner highlights many of the inconsistencies within historical accounts, and the Navy's over embellishments of the contributions of the US Marine Corps.⁸ His work draws conclusions that it was a natural progression in 1942 for the Army to develop their own amphibious capabilities, specifically the Engineer Amphibian Brigades, due to the inadequate training and preparedness of the Navy to conduct large scale landing operations.⁹ Dyer's work expertly navigates the impacts of interservice rivalries and provides a balanced understanding of the Navy's contributions to mobilize forces for Operation Torch.

The development of the Joint landing doctrine has received significant attention by other historians. William Atwater provides one of the clearest and most complete accountings of the series of exercises conducted by the Army and Navy after the Spanish American War. His thesis supports the belief that the lack of large-scale training during the budget constrained interwar years was an important factor to the lack of preparedness to project combat power over the shore in the early stages of World War II. He clearly documents inter service rivalries but also comes to the conclusion that these were of minor significance during the execution of Operation Torch.¹⁰ David Nasca provides a

⁸ George C. Dyer, *The Amphibians Came to Conquer: The Story of Admiral Richmond Kelly Turner* (Washington, DC: United States Government Printing Office, 1972), 202.

⁹ Ibid., 215.

¹⁰ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 165.

parallel study to Atwater and differentiates his work in the view that amphibious operations were the primary strategic capability which enabled the United States to become a great power. His work also focuses on the development of joint doctrine but highlights the importance of the service school contributions.¹¹ As a Marine officer, Nasca provides a greater Naval perspective on the amphibious development in the interwar years and ties the strategies of the greater naval force into his work. Both Nasca and Atwater contribute to the explanation that the source of the problems observed during Operation Torch were from poor preparations during the interwar period.

This work accepts that the landings were near disastrous as many have accurately argued before. Alfred Vagts may have said it better than anyone else by stating, “Had we been meeting well-prepared Germans instead of French troops, whose heart was not in the business, the results almost certainly would have been a bloody repulse.”¹² Many factors play into this near disaster, with many works examining the effect of the Vichy French leaders or other factors, but what is most important was the unpreparedness of the joint force to conduct over-the-shore operations. The campaign’s operational objectives relied upon the operational reach of the Allied force which hinged upon the rapid seizure of French ports as opposed to planning and preparing to move men, equipment, and logistics over the shore. Had these ports been denied, the over-the-shore operations would have become the “work around,” which no one was prepared to do.

¹¹ Nasca, *The Emergence of American Amphibious Warfare*, 159.

¹² Alfred Vagts, *Landing Operations: Strategy, Psychology, Tactics, Politics: From Antiquity to 1945* (Washington, DC: Military Service Publishing, 1946), 722.

This work begins by capturing the conditions before the war which hampered Operation Torch. Differences in the services' doctrine and poor training readiness contributed to the problems observed during the landing, but more importantly the lack of organizations and technical service troops at the outbreak of the war was a major contributing factor to the poor performance. Few works on Operation Torch detail the massive reorganizations of both the Army and the Navy during 1942, and the effects that these large reorganizations had on planning and execution. The Army during mobilization had to create completely new units to support modern military operations to include the engineer amphibious brigades, port battalions and transportation units. The frictions introduced by these reorganizations during planning for Operation Torch were detrimental to the effectiveness of the Allied force in North Africa, although essential for the large war effort.

Finally, this work examines the tactical decisions of leaders and compares difference in plans and the results of the different task forces. The differences in plans and compositions of each of the landing task forces involved in Torch provides an opportunity to examine successful and less successful plans. Each landing area had different operational and mission variables associated with it. However, broad assertions can be made accounting for these differences.

Unlike operations later in the war, the fact that Operation Torch was the first major action of the United States Army in 1942 is important. Later operations benefited from the full mobilization of the industrial base and the populace of the United States. Operation Torch was early enough in the war that the effects of prewar preparations, mobilization, and final preparations came together and the interrelationship between

these time frames can be examined. Looking only at the activities after the decision to execute Operation Torch in 1942 is insufficient which is why this work must start at the beginning of the 20th century after the Spanish American War.

CHAPTER 2

PRE-WAR PREPARATIONS

The period between the end of the Spanish American War and the outbreak of World War II was significant to the development of the American military's capability to conduct overseas expeditions and landing operations. Major changes in military technology and World War I forced the rapid transformation of the United States military to meet emerging global threats. The lessons learned from the Spanish American War, World War I, and the years between World War I and World War II shaped the organization, doctrine, training, and material readiness of the United States military. While the changes implemented across the military made the landings in North Africa possible in 1942, the failure to adequately address the complexities of projecting a modern mechanized force across the beach was an inadequacy of the Army, Navy and Marine Corps during this period.

Spanish American War to World War I

The period between the Spanish American War and World War I is important as it highlights the American military's recognition that future overseas operations would be inherently joint ventures. David Nasca argues the Spanish American War was the first major overseas operation that employed amphibious operations, and that these actions brought the United States onto the global stage in a way not seen before.¹³ While the war was an overall success, he highlights numerous examples during the war where slow and

¹³ Nasca, *The Emergence of American Amphibious Warfare*, 14.

ineffective landings of American troops allowed defenders ample time to prepare extensive defenses that could have been avoided had the landing operations been more decisive.¹⁴ Significant improvements in amphibious capabilities were not made by the American military prior to World War I. However, improvements of joint relationships between the Army and Navy were vital to further developments after the war.

To begin to rectify the issues with joint operations during the Spanish American War, Secretary of War Elihu Root and Secretary of the Navy William Moody agreed to establish a Joint Board in 1903 between the two services.¹⁵ The Army and Navy had significant differences in command and control philosophies. The nature of warfare specific to each service was the driving factor in these differences. The Army advocated for strong centralized control, vital to rapidly mobilizing an army and controlling land operations. The Navy on the other hand, focused on decentralized control, as naval operations around the world had little ability for any central authority to control after a fleet's departure from a home port.¹⁶ David Nasca and William Atwater document these differences as central to the problems in joint operations during the Spanish American War, and were the focus of the Joint Board after its creation. The central issue of command and control between the services was the catalyst for the establishment of the

¹⁴ Nasca, *The Emergence of American Amphibious Warfare: 1898-1945*, 42.

¹⁵ Ryan Wadle, "Failing to speak the Same Language: The Roots of "Jointness" in the United States, 1919-1941," *The Journal of Military History*, No 84, (October 2020): 1097-1126. 1100.

¹⁶ John Kuehn, *America's First General Staff: A Short History of the Rise and Fall of the General Board of the Navy, 1900-1950* (Annapolis: Naval Institute Press, 2017), 24.

Joint Board and the subsequent efforts on doctrine, training, and planning before World War II.¹⁷

Shortly after the formation of the Joint Board, both the Naval War College and Army War College contributed to the first significant doctrine following the Spanish American War. First Published in 1905 the “Rules for Naval Convoy of Military Expeditions” detailed the roles and responsibilities of the Army and the Navy in overseas expeditions. While the contents of this document did not have any significant bearing on the conduct of landing operations in 1942, it is the clearest example that military leaders understood the complexity of the two services working together and the need for clear doctrine to support joint operations.¹⁸

Today, the amphibious role of the United States Marine Corps is engrained in the culture of the American military but that was not the case in the early 1900s. Between the establishment of the Joint Board in 1903 and outbreak of World War I, there were significant changes due to the rapid improvements in naval firepower and defensive weapons aboard ships. No longer were Marines needed to defend against enemy combatants boarding friendly vessels. At the same time, the Army had proven it was capable of overseas deployments following the Spanish American War.¹⁹ These factors brought into question the need for the separate Marine Corps. On the 12th of November 1908 President Roosevelt issued executive order 969, removing all shipboard

¹⁷ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 17.

¹⁸ Ibid., 19.

¹⁹ Nasca, *The Emergence of American Amphibious Warfare*, 155.

assignments for marines and establishing six functions of which all were effectively protection duties for Navy garrisons.²⁰ This assault on the existence of the Marine Corps required changes to preserve their service, setting the stage for their role as the principle amphibious force for the naval fleet.

After the executive order in 1908, leaders at the Naval War College turned the Marine Corps' attention to the role of securing advance bases. Naval strategies emerging during this period depended on a force to secure forward bases and if necessary, seize terrain to allow coaling operations. Ships of the era relied on safe harbors, sheltered from sea swell, to transfer coal from one ship to another. This required not only naval power to secure the maritime areas around the coaling stations, but a force that could protect the ships from land-based threats. Marine Corps leaders advocated with little success for this new role until after World War I because as Nasca argues, civilian leadership viewed the Marines as a colonial police force for small wars.²¹

By limiting the role of the Marine Corps, President Roosevelt's executive order made the Army the principal landing force by default. Army and Navy operations in the Caribbean during the Spanish American war had been initially dismal, with poor cooperation between the services. The Army was fully unprepared to conduct landing operations at the time, and during the period between 1908 and World War I the Army

²⁰ President Theodore Roosevelt, Executive Order No. 959, "Defining the Duties of the United States Marine Corps," (The White House, Washington, DC, 12 November 1908), <https://www.usmcu.edu/Research/Marine-Corps-History-Division/Frequently-Requested-Topics/Historical-Documents-Orders-and-Speeches/Defining-the-Duties-of-the-United-States-Marine-Corps/>.

²¹ Nasca, *The Emergence of American Amphibious Warfare*, 158.

did little to correct this.²² Most exercises of the period were focused on land-based division campaigns at encampments and interior training areas of the United States.²³ There are few indications that the Army had embraced its role in landing operations after the lackluster performance during the Spanish American War.

During World War I while militaries around the world engaged in battles and campaigns, learning valuable lessons on joint operations, orders from President Wilson impeded the United States Joint Board. In 1913, during increased tensions with Japan, the Joint Board attempted to assert greater operational control over forces around the world. In response to what was perceived by President Wilson as the overreach of senior military leaders to control the actions of deployed forces, he prevented the meeting of, or ignored the Joint Board from 1914 to the end of World War I.²⁴ This action set a disastrous precedent for the interwar years, during which the services continued to develop independent doctrine that was not consistent with joint doctrine or the other services. While the relevance of the Joint Board recovered after World War I, it did not rise to significant enough prominence to fully prepare the force for joint landing operations by World War II.

America's experience in World War I was void of almost any landing operation, with the majority of forces disembarking in French ports. The only landing operation

²² Atwater, *United States Army and Navy Development of Joint Landing Operations*, 11.

²³ Charles McKenna, "The Forgotten Reform: Field Maneuvers in the Development of the United States Army, 1902-1920," (Ph.D. diss., Duke University, 1981), 99.

²⁴ Dyer, *The Amphibians Came to Conquer*, 153.

conducted by the United States was a small contingent of Army and Navy forces nicknamed the “Polar Bear Expedition.” The operations conducted in Vladivostok and Murmansk in 1918 were to prevent Allied supplies intended for Russia from falling into German possession.²⁵ These minor landings lacked any significant resistance, other than the Arctic cold, and did not significantly contribute to any body of knowledge regarding amphibious warfare after the war. Without experiences of their own, American military officers devoted their studies during the interwar period to landing operations conducted by other nations during the war.

Post-World War I Developments

Following World War I, agreements among nations and studies of the war changed the American military’s views of amphibious operations. From 1918 to the early 1930s both the Army and Navy committed significant time and effort to studying the war and updating professional education. This period was essential to the development of future doctrine and training that would be conducted during the 1930s.

In the midst of the global demobilization following the war, leaders from around the world met for the Washington Naval conference in 1922. The conference focused on fleet size limitations but more notable for the future of landing operations were the limitations on advanced basing. As discussed earlier, America’s naval strategies required the ability to refuel ships to project power around the globe. As part of the Washington Naval Treaty the United States agreed to limit the construction of naval bases in the

²⁵ Nasca, *The Emergence of American Amphibious Warfare*, 96.

western Pacific, thus limiting flexible options to project naval power to the region.²⁶ This development motivated the Marine Corps to pursue and advocate for its role in expeditionary and landing operations during the interwar years.²⁷

The limitations in basing and fleet sizes imposed by the treaty changed the strategic environment and caused the military planners to reevaluate existing doctrine and war plans.²⁸ To ensure the global reach of the United States Navy, leaders recognized that a trained force was needed to secure, even if only temporarily, harbors and bases on islands in the Pacific to support a naval fleet. Marines, who had been limited by executive orders before World War I, became the Navy's solution to this problem. The capability to seize key terrain in the Pacific became of vital importance to counter the rising threat of Japan during the 1920s and 1930s under War Plan Orange.

In 1923, the Army and the Navy executed their first joint landing exercise of the interwar period in Panama. This exercise and the ones that would follow were to build upon the lessons captured from other nations during World War I and forced the services to adapt to the new operating environment that the Washington Naval Treaty created. Leaders noted the Allied failures at Gallipoli and recognized the importance of landing operations in future conflicts.²⁹ The 1923 exercise conducted in Panama was primarily

²⁶ Nasca, *The Emergence of American Amphibious Warfare*, 134.

²⁷ Allan Millett, "Assault from the Sea," in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millet (New York: Cambridge University Press, 1996), 72.

²⁸ Nasca, *The Emergence of American Amphibious Warfare*, 135.

²⁹ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 54.

focused on the defense of the canal zone, much like exercises conducted prior to World War I. The landing operations that did occur during the exercise were hindered by interservice rivalries and disagreements over exercise rules. The final reports presented to the Joint Board led to the conclusion that future training needed greater direction from the Joint Board to ensure effectiveness of the exercise.³⁰ While the exercise derived little in terms of landing doctrine or capabilities, the realization of the need for future realistic training, focused on landing operations, was the most significant contribution from the 1923 exercise.

In response to the lessons learned from the 1923 exercise, the Army and the Navy conducted a second joint exercise in 1924 in the Caribbean. To increase realism, the exercises included opposing forces and umpires to record the results of the operations. The need to improve fire support coordination between ground and naval forces dominated many of the observations. What is arguably more important however, was the lack of procedures to debark Soldiers and Marines into landing craft, and the poor handling of landing craft assaulting toward the beaches. Brigadier General Eli Cole, USMC, observed that poor navigation resulted in landing craft arriving at the wrong beaches and transports were poorly loaded with both soldiers and supplies.³¹

A year later the joint force conducted another exercise of similar design in Hawaii. This time 2,500 Marines replicated a landing force of 42,000 and the Army provided troops to defend against the invasion as part of the “Black Force.” Similar

³⁰ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 54.

³¹ *Ibid.*, 56.

issues with transports and landing craft appeared again, especially in the heavier swell of the Pacific.³² Due to other priorities and a lack of funding, this exercise would be the last joint landing exercise until 1932. After the seven-year break in training, the same observations of poor loading and handling of landing craft, the lack of sufficient equipment, and under resourced training would reemerge and be repeated at almost every exercise until the outbreak of World War II.

With no joint training exercises conducted from 1925 to 1932, the most notable progress on landing operations was the advances in doctrine. While the Army during this period produced studies on landing operations, the naval service and the Joint Board produced both draft and completed forms of doctrine. The Naval War College produced and distributed a study titled “Notes as to Joint Army and Navy Action in Overseas Expeditions,” in 1926, drawing on lessons from the Spanish American War, World War I, and the three exercises of the 1920s. This document was a rough draft for future doctrinal publications meant to facilitate discussion and to solicit “constructive suggestions and criticisms.”³³ Prior to this time, publications between the services had focused on convoy operations and coastal defense making this the first a significant step towards doctrine for landing operations.

³² Atwater, *United States Army and Navy Development of Joint Landing Operations*, 58.

³³ Logistics Section, Naval War College, “Notes as to Joint Army and Navy Action in Overseas Expeditions,” (Course in Logistics, Naval War College, November 1926), 1.

In the next year, 1927, the Joint Board produced a true joint publication titled *Joint Action of The Army and The Navy*.³⁴ The document delineated responsibilities of the services in five classes of joint operations: overseas movements, landing attacks against shore objectives, attacks against shore objectives by land and sea, coast defense, and special situations. Of most importance to this work is section VI of chapter IV which specifies responsibilities of both the Army and Navy during “Landing Attacks Against Shore Objectives.” While short in length at only one typed page, this document delineated specific responsibilities to the services during landing operations. It provided an outline for the services to further develop their own doctrine and develop training to meet these requirements.³⁵ Issues of command and control, tactics, and technical procedures were left out of this initial publication to be addressed in separate publication later after more work was completed. At the time of the publication, none of the services to include the Marine Corps had active doctrine specific to landing operations to rectify these shortcomings, but over the next several years these gaps were addressed.

While much was left to be desired in this first publication, the delineation of supporting tasks was an important foundation for further action throughout the interwar years. The publication placed emphasis on the Army as the primary landing force of the military with the Marines fulfilling the same duties when needed. A notable requirement in this document specified the Navy to provide landing craft and crews for landing operations, a change from the last combat experiences of the United States military

³⁴ Joint Board, *Joint Action of The Army and The Navy: 1927* (Washington, DC: United States Government Printing Office, 1927).

³⁵ *Ibid.*, 12.

during the Spanish American War.³⁶ Throughout the interwar years due to restricted budgets and the manpower requirements, the Navy for the most part failed to prioritize this requirement.³⁷ The lack of transports and landing craft not only affected the execution of operations during the campaigns in 1942 but also all the training activities during the interwar period.

Following the initial publication of *Joint Action* the United States Navy, Marine Corps, and Army all undertook studies of World War I landing operations. At both the Naval War College and Marine Corps School at Quantico in 1929, officers conducted in depth studies of Gallipoli by the British and the Baltic Sea landings by the German Army during Operation Albion.³⁸ One such study presented by Lieutenant Commander Albert Schrader concluded that although serious limitations existed during World War I, amphibious landings were possible in modern warfare. His study focused on the extensive coordination between naval gunfire and the landing force as an essential component to success.³⁹ However, in the study of Gallipoli discussions of logistical support for landing forces emerged, and the general consensus was that decisive and swift landings would secure objectives fast enough that the need for substantial or prolonged over-the-shore logistical operations would be eliminated.

³⁶ Joint Board, *Joint Action of The Army and The Navy: 1927*, 12.

³⁷ Dyer, *The Amphibians Came to Conquer*, 216.

³⁸ Nasca, *The Emergence of American Amphibious Warfare*, 159.

³⁹ *Ibid.*, 160.

At the same time Army officers at both Carlisle and Leavenworth were writing on the same topics.⁴⁰ Numerous studies of Gallipoli and other landings were produced during the late 1920s and early 1930s which yielded findings similar to those of the Navy and Marines.⁴¹ Most importantly the studies from the schools show that landing operations were more than feasible in modern warfare, and with proper resourcing and coordination were a viable option for planners.

Immediately following Commander Schrader's study in 1929, the Naval War College implemented further instruction on the lessons learned into the professional military education curriculum. In 1930 students received lessons on Gallipoli with four main points for successful operations: 1) clear chain of command for all forces; 2) dissemination of clear and detailed orders; 3) do not attack prematurely; 4) provide supplies and equipment stowed aboard ships in reasonable approximation to order needed ashore.⁴² While the presentations in 1929 did not significantly emphasize the need for logistics, the course of study in 1930 did address the issue.

Army leaders were also learning from the past conflicts and publishing studies to further the body of knowledge on amphibious operations during this time. The

⁴⁰ Ike Skelton Combined Arms Research Library (ISCARL), "CGSS Student Papers, 1930-1936," ISCARL Digital Library, accessed February 9, 2022, <https://cdm16040.contentdm.oclc.org/digital/collection/p4013coll14/search/searchterm/landing>. Database of student papers regarding landing operations from during late 1920s and early 1930s.

⁴¹ Earl McFarland, "Allied Landing at Gallipoli in 1915," (Individual research, The Command and General Staff School, 1931). Digital archives at Combined Arms Research Library holds many other studies during this time period similar to the work of McFarland.

⁴² Dyer, *The Amphibians Came to Conquer*, 207.

curriculum at the Command and General Staff College went through significant changes during the interwar years; however, lessons and symposiums on overseas expeditions remained consistent throughout. In the late 1920s approximately five symposiums over the two years of study were dedicated to topics relating to overseas expeditions and expeditionary forces.⁴³ The separate courses of instruction at the services' institutions led to diverging views and theories that manifested during the mid and late 1930s as was evident when service specific doctrine was produced.

While the Navy and Marine Corps in the late 1920s studied World War I and updated doctrine and training, their assumption remained that the objectives of landing operations were limited to securing advanced bases. The Navy, planning against Japan in War Plan Orange, remained focused on securing advance bases needed in the Pacific to sustain their fleet. By narrowly framing the problem to these operations, neither the Navy nor Marine Corps placed significant emphasis on sustaining large formations ashore, and with no funding for joint exercises until 1932, neither did the Army.⁴⁴

1930s and the Final Preparations for War

In contrast to the academic work conducted in the 1920s, the 1930s saw significant efforts in the publication of doctrine and the conduct of training. The lessons learned from the studies after World War I were finally codified and updated in both joint and service specific doctrine in rapid succession from 1934 through 1941. The military

⁴³ Elvid Hunt and Walter Lorence, *History of Fort Leavenworth 1827-1937* (1937; repr., Fort Leavenworth, KS: Fort Leavenworth Historical Society, 1981).

⁴⁴ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 68.

conducted numerous service and joint training events during the 1930s, using recently published doctrine and experimenting with emerging technologies. While significant strides were made during this time, the limitations of rapid power projection over-the-shore persisted.

In 1932, the Army and Marine Corps finally received congressional funding to conduct the first major joint landing exercise since 1925. Still, budget constraints severely limited the event's usefulness. The 1932 exercise executed in Hawaii, simulated the landing of one Army division and one Marine Corps division debarking from 25 different transport ships. The actual composition of the training force was 600 Soldiers, 700 Marines, and 101 animals debarking from two transport ships. The lack of training prior to this resulted in the landings being so poorly executed that by mid-afternoon the exercise was terminated due to "excessive failures." Observing the landing, General H. M. Smith, USMC, described the operation as a "dismal exhibition."⁴⁵ While poorly funded in its own regard, the failures of the 1932 exercise were likely a product of the seven-year break in training. The trend of poorly resourced training exercises, which simulated larger forces than present, plagued the interwar military and was a significant contributing factor to the eventual difficulties in the scope of operations in North Africa.

Two years later the Marine Corps took the lead on service specific doctrine publishing a draft manual titled *US Marine Corps Tentative Manual of Landing Operations*. In 1935 the final publication was released titled *Landing Operations*

⁴⁵ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 71.

Doctrine.⁴⁶ While it still focused on landing ground forces to secure limited objectives to support the Navy, the manual was a significant improvement over the general doctrine published by the Joint Board in 1927. The document that the Marine Corps produced addressed in significant detail all aspects of landing operations to include fire support, engineering, logistics and more.⁴⁷ The greater detail in the technical aspects of landing operations contained in this manual became the basis of the Navy's own doctrine several years later and the joint doctrine published the next year.⁴⁸

Even with the Marine Corps taking the lead in landing operations doctrine, interservice rivalries affected the development of the updated version of *Joint Action*. In 1935, General Douglas MacArthur while serving as the Chief of Staff of the Army, advocated for the Marine Corps to be dissolved into the Army. In his position on the Joint Board he influenced the removal of the Marines from expeditionary operations and advocated for the Army as the principle landing force.⁴⁹ In fact, in the 1935 version of *Joint Action* the Marine Corps is not even mentioned.⁵⁰ The exclusion of the Marine

⁴⁶ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 79.

⁴⁷ United States Marine Corps (USMC), *US Marine Corps Tentative Manual of Landing Operations* (Washington, DC: Headquarters, US Marine Corps, 1934).

⁴⁸ Frank Hough, Verle Ludwig, Henry Shaw, *Pearl Harbor to Guadalcanal*, (Washington, DC: Historical Branch, G-3 Division, Headquarters, US Marine Corps, 1958.), 14.

⁴⁹ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 84.

⁵⁰ Joint Board, FTP-155, *Joint Action of The Army and The Navy* (Washington, DC: United States Government Printing Office, 1935).

Corps was reversed upon MacArthur's departure for command in the Pacific in 1936.⁵¹ While a seemingly insignificant paper fight in Washington, the shifting responsibilities negatively influenced readiness and war planning until 1939, when President Roosevelt intervened and direct the Joint Board to report directly to him.⁵²

While the Marines were not included in the 1935 version of *Joint Action*, this updated doctrinal publication provided far greater detail for joint expeditions and landing operations. It increased the section on landing operations from a single page to a full chapter. Likely influenced by the Marine Corps' work the year prior, the information was far more detailed and was vital to prepare the joint force for future conflict.⁵³ During the remaining six years of peace both the Army and Navy updated their own publications following the general outline of the 1935 joint publication. Each service, however, emphasized different portions based on their own interpretations for the purpose of amphibious operations and their service responsibilities. Not surprisingly, these small deviations in doctrine between the services resulted in significant issues during the opening campaigns of the war.

The difference found in doctrine between beach and shore parties was one of these small differences that affected the ability of the joint force to project combat power

⁵¹ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 85.

⁵² Ryan Wadle, "Failing to speak the Same Language: The Roots of 'Jointness' in the United States, 1919-1941," *The Journal of Military History*, no 84, (October 2020): 1123.

⁵³ Joint Board, FTP-155, *Joint Action of The Army and The Navy* (Washington, DC: United States Government Printing Office, 1936).

across the shore in North Africa. While more detailed than any preceding doctrine, the 1934 Marine Corps manual did not delineate the difference between a beach and a shore party. The manual referred to a “Regulating Party” in section 2-110, blending the responsibilities of the beach and the shore party found in joint doctrine published the following year.⁵⁴ The lack of delineation is most likely attributable to their assumption that the Marine Corps would conduct landing operations without other services participation. The 1935 version of *Joint Action* was the first publication detailed enough to differentiate these duties. The beach party in this manual was specified as a naval function, responsible for controlling landing craft actions up to the high-water mark. The beach party was also responsible for maintaining communication to the naval force. The shore party was an Army responsibility and the manual specified duties for controlling engineer and labor troops, equipment, and supplies once arrived on the beach.⁵⁵ Doctrine published later by both the Army and the Navy deviated from this joint manual and blurred the delineations and responsibilities of these parties. In both cases, they tried to place the responsibility for shore and beach parties on the other service.

The Navy and the Marines conducted independent landing operations in 1935 and 1936. Fleet Landing Exercises 1 and 2 were again under resourced and poorly executed demonstrations. The Navy during this period had so few troop transports that the Marines were transported to the landing exercise on battleships and other warships and taken to

⁵⁴ USMC, *US Marine Corps Tentative Manual of Landing Operations*, II-5.

⁵⁵ Joint Board, *Joint Action of The Army and The Navy*, 1936, 106.

shore in small boats not designed for landing operations.⁵⁶ Logistics to sustain the landing forces were procured from units staged ahead of the exercise, and no significant emphasis was placed on importance of over-the-shore sustainment.⁵⁷ A majority of attention during and after the exercise focused on coordination between landing forces and naval gunfire, which had been key points of discussion during the Naval War College studies of the late 1920s. The concept of landing divisions of marines was realized by the Marine Corps in their 1934 publication of the tentative landing manual; however, as demonstrated by the poor logistical performance, these developments in doctrine and theory were still not fully established in practice by 1936.⁵⁸

After strong pressure from several naval officers, the Army agreed to take part in Fleet Landing Exercise 3 in 1937.⁵⁹ Even with updated joint doctrine, the results of the landing exercises indicated little improvement in overall readiness since 1932. The Army's 30th Infantry Regiment conducted extensive training leading up to the exercise with assistance from a Marine Corps training team. During execution the Army had issues combat loading their transports and debarking equipment into landing craft so that equipment and supplies were brought ashore in the correct order. The Navy was also still using small craft designed for use in the calm waters of harbors and ports and struggled to

⁵⁶ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 88.

⁵⁷ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 89.

⁵⁸ Nasca, *The Emergence of American Amphibious Warfare*, 164.

⁵⁹ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 90.

safely navigate them through the surf to land the Army and the Marines.⁶⁰ The most prominent feature of the after-action reviews highlighted issues with naval gunfire support during the landing. However, there was limited discussion about improving the projection of large forces over the shore.⁶¹

William Atwater notes that after Fleet Landing Exercise 4 in 1938 observers did not even bother noting the recurring issues plaguing landing operations, choosing to only highlight the positives.⁶² During this exercise the Army's new Chief of Staff, General Craig, recognized the need for more participation in future landing exercises with the Navy. However, it was then the Naval Chief, Admiral Leahy, who rejected this idea on the presumption that the next war would not see any significant landings early in the conflict. His argument was to focus on landings of limited scope and objective to once again support the forward basing of naval support.⁶³ The back-and-forth relations between the two services still significantly affected the ability to enhance doctrine, training, and material readiness in 1938.

The objections of Admiral Leahy to further joint training in 1938 seem counterproductive but changes to naval strategy at that time provides an explanation for this action. In 1935, Japan withdrew from the arms limitations imposed by the Washington and London naval treaties of the 1920s and planned to increase the number

⁶⁰ Ibid., 93.

⁶¹ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 90.

⁶² Ibid., 103.

⁶³ Ibid., 109.

of their capital warships, specifically battleships.⁶⁴ By 1937, the United States had done the same and continued to develop plans for the defense of the Pacific under War Plan Orange. The changes in the operational environment changed naval strategy and affected the development of the Navy's landing doctrine under development.⁶⁵ The importance of strong naval presence supported by small forward bases was more important than ever by 1938.

That same year the Navy published their final landing doctrine before the war titled Fleet Training Publication 167, *Landing Operations Doctrine*.⁶⁶ This doctrine, much like the Marine Corps' publication, was full of specific and technical details necessary for executing landing operations. The most important deviation from the Joint doctrine and the future Army doctrine was the objectives of landing operations that the Navy specified. Objectives of landing operations included: "Securing bases for our fleet or components thereof," "for denying bases of facilities to the enemy," "for protection of life and property in connection with small wars," "for sabotage," and "for the conduct of such other land operations as may be required in the prosecution of the naval campaign."⁶⁷ These limited objectives deviated significantly from the broader military

⁶⁴ Kuehn, *America's First General Staff*, 179.

⁶⁵ Kuehn, *America's First General Staff*, 182.

⁶⁶ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 80.

⁶⁷ Office of Naval Operations, Division of Fleet Training, F.T.P. 167, *Landing Operations Doctrine: United States Navy* (Washington, DC: United States Government Printing Office, 1938).

objectives of landing operations found in the Joint Doctrine.⁶⁸ As previously discussed, this deviation is attributed to the focus on War Plan Orange and the Japanese threat in the Western Pacific, but deviating from joint publications and the Army's understanding did not allow the military as a whole to prepare the capabilities needed at the outbreak of World War II.

By 1940, Army leadership became extremely worried about the Navy's capability to uphold their specified requirements for landing operations in *Joint Action*. A survey of landing support vessels in February of that year found the Navy only had thirty-five troop landing craft, five tank lighters, six artillery lighters, and no significant troop transport ships.⁶⁹ In November of that same year, the Army possessed fifteen ocean going troop transports and associated landing craft, but neither service had recognized the need for significant numbers of large landing craft and tank lighters. Military observers had seen the success Japanese forces were having with these resources in the Pacific, and the British Army during this time placed significant emphasis onto the development of these craft, but the United States military failed to follow suit.⁷⁰ The Navy eventually convinced the President to order the Army to transfer possession of the ocean-going troop transports to their service, but did not take immediate actions to further remedy the

⁶⁸ Joint Board, *Joint Action of The Army and The Navy*, 1936.

⁶⁹ Dyer, *The Amphibians Came to Conquer*, 208.

⁷⁰ J. D. Ladd, *Assault from The Sea 1939-45: The Craft, The Landings, The Men* (New York: Hippocrene Books Inc., 1976), 90.

shortage.⁷¹ The limitations in quantity and quality of transports and landing craft would affect future operations for the United States as will be discussed later.

During the same year the Army advocated for further joint landing exercises in California with the 3rd Infantry Division. Before the training began, evidence suggests that the military's readiness for amphibious operations had declined rather than improved. The naval commander was unwilling to land soldiers over the beaches due to untrained boat crews, instead electing to bring landing craft into the harbor and offload at piers.⁷² The exercise along with lack of available landing craft drew concerns from Army leadership that the Navy would be unwilling and unable to uphold their requirements specified in the 1936 version of *Joint Action of the Army and the Navy*.⁷³

The fears of the Army were reinforced in February 1941 during the last prewar joint training exercise. Conducted between the 4th and 14th of February, the Army and the Marines conduct a series of landings in the Caribbean. Admiral Ernest King, having just been appointed as the commander in chief of the Atlantic Fleet, reported after the exercise that the Navy was unprepared to conduct large scale joint landing operations due to poor quality and shortage of landing craft.⁷⁴ In his memoir Admiral King also noted the poor performance of Army soldiers as compared to Marines in the exercise,

⁷¹ Dyer, *The Amphibians Came to Conquer*, 214.

⁷² Atwater, *United States Army and Navy Development of Joint Landing Operations*, 124.

⁷³ *Ibid.*, 127.

⁷⁴ *Ibid.*, 136.

addressing the issue afterwards with General Marshall in Washington DC.⁷⁵ While his observation of tactical level issues is important, he also noted in his memoirs that Marshall's opinion during their meeting was that the Marine Corps was too small and lacked the technical services necessary to support large landing operations.⁷⁶ King's statement provides supporting evidence of the Army's fear in 1941 that the Navy and Marine Corps were unprepared to execute their responsibilities established in the "Joint Action" doctrine.

The Army was as unprepared as the Navy and Marines were in 1941 but made efforts to improve by publication of their own doctrine in June of that year. The doctrine was a near carbon copy of the Navy's and the joint publications before it; however, there were several key differences. First and most significant were the objectives of landing operations, which in the Army's doctrine were broader and supported larger ground operations against enemy forces.⁷⁷ The Army also devoted a significant portion of a chapter to landing horses and pack animals from ship to shore, highlighting the lack of appreciation for the significant shift to mechanized warfare occurring in Europe.⁷⁸ What this doctrine failed to detail was the logistical activities needed to support landing operations. The lack of emphasis on logistics continued during pre-war preparations and

⁷⁵ Ernest King and Walter Whitehill, *Fleet Admiral King: A Naval Record* (New York: W. W. Norton: 1952), 320.

⁷⁶ King and Whitehill, *Fleet Admiral King*, 322.

⁷⁷ United States Army, Field Manual 31-5, *Landing Operations on Hostile Shores* (Washington, DC: United States Government Printing Office, 2 June 1941).

⁷⁸ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 146.

was a significant contributing factor to the limited operational reach upon landing in North Africa.

The Army conducted one final large landing exercise between the 4th and 12th of August 1941. This operation was unique as it was the only operation of the interwar period that had significant logistical and technical service emphasis. The exercise included the landing of 350 vehicles, 2,200 tons of supplies and 16,000 troops. The lack of doctrine or training before the exercise resulted in failure, with only half of the planned supplies and material landing before the beaches were congested and the exercise was halted.⁷⁹ Food shortages among the training soldiers were so significant that engineer forces not participating in the exercises were called from a nearby camp to bring supplies and assist on clearing the beach and organizing logistics.⁸⁰ While the Army was concerned with the Navy's readiness after the February exercise, it was this exercise that highlighted the Army's overall lack of preparedness to meet their own doctrinal objectives to project a large land force to defeat an enemy.

Likely a product of the conflicts erupting around the world at the time, the training conducted in 1941 was a significant improvement over the exercises of the previous two decades. Summarized in table 1 below are the eleven different training exercises of the interwar period. Trends of unsuitable and insufficient landing craft and transports, adverse effects of smoke screens, and untrained boat crews are easy to spot. What is not as obvious and was missing until 1941 was significant logistical

⁷⁹ Atwater, *United States Army and Navy Development of Joint Landing Operations*, 148.

⁸⁰ *Ibid.*, 149.

considerations and training. The outcomes of these training events did not sufficiently address logistical issues because in many cases logistics were not brought over the shore, but rather administratively distributed.

Table 1. Summary of Interwar Landing Exercises

<u>Date</u>	<u>Training Event Name</u>	<u>Location</u>	<u>Participants</u>	<u>Major Outcomes</u>
Spring 1923	Joint Army and Navy Problem No. 1	Panama	Army and Navy	Test of Panama Canal Zone defensive plan. Future training needed rules and guidance established by Joint Board. Future iterations should be two-sided maneuvers
Spring 1924	Joint Army and Navy Problem No. 2	Caribbean	Army, Navy and Marine landing force.	Issues with naval gunfire support, handling of landing craft. After action report lacked extensive discussion of landing portion.
Spring 1925	Joint Army and Navy Problem No. 3	Hawaii	Army, Navy and 2,500 Marines	Unsuitable small boats to travers heavy swell. Cooperative method of command was inadequate for landing operations.
February 1932	Joint Army and Navy Problem No. 4	Hawaii	600 Soldiers 700 Marines 101 Pack Animals	Landings were a failure because landing craft were unsuitable. Sever lack of coordination between Navy and Army landing force and air component.
Spring 1935	Fleet Landing Eeercise (FLEX) 1	Puerto Rico	Navy and Marines	Lack of transports required use of battleships to ferry troops. Unsuitable small boats used as landing craft
Spring 1936	FLEX 2	Puerto Rico	Navy and Marines	Unsuitable landing craft and smoke screens caused landing craft to become disoriented on the way to the beach and fail to effectively deploy troops.
Spring 1937	FLEX 3	San Clemente, CA	1 x Army Regiment, 2 x Marine Brigades, and Navy	Battleships and cruisers used to transport Marines due to insufficient tranports. Unsuitable landing craft to land through high surf.
Spring 1938	FLEX 4	Culebra and Puerto Rico	Army, Navy and Marines	Lack of transports and landing craft. Logistics not realistic. Tried smoke screens again with same results from 1935 and 1936.
January 1940	Army and Navy Joint Exercise	California	Army and Navy	Navy landing craft crews untrained and did not land in surf zone. Inadequate and insuficent landing craft. Troops were brought ashore at docks, no landings conducted
February 1941	FLEX 7	Caribbean	2 x Army Battalions, 3 x Marine Battalions, and Navy	Issues with ship to shore communications. Lack of unloading logistics at scale. Lack of transports and landing craft.
August 1941	"CARIB"	North Carolina	16,000 Army and Navy	Largest landing before the war. Significant logistical issues with simple supplies such as food halted the training. Lack of beach and shore parties.

Source: Created by author.

With war raging around the world in 1941, both services made significant improvements throughout the year with the procurement of more landing craft. By the 30th of September 1941 the Army reported enough landing craft on hand to land a standard triangular division, a dramatic improvement from the reports in February of the same year.⁸¹ The improvements in landing craft numbers set the United States military on an upward trend that made the final training and execution of Operation Torch feasible in 1942.

It is easy to criticize the activities of the Army, Navy, and Marine Corps during the period between the Spanish American War and the United States' entrance into World War II. The contributions to develop doctrine, to conduct exercises to validate that doctrine, and efforts to procure resources were vital to even having a conversation about large scale amphibious landings in 1942. The greatest shortfalls in these developments, however, do not account for the rapid mechanization of warfare during the last years of World War I and the interwar period. The technical and logistical services to support the new form of warfare were immense and had yet to be fully realized by the military as a whole. Even simple planning factors for fuel consumption had to be borrowed from the British Army at the outset of the war.⁸² The logistical and technical service support to landing operations was an extension to this greater military problem, and without full scale landing exercises before World War II the services were left with un-validated doctrine, organizations, and material.

⁸¹ Dyer, *The Amphibians Came to Conquer*, 209.

⁸² Mark Kitchen, "The North African Campaign: A Logistics Assessment," (Master's thesis, US Army Command and General Staff College, 1991), 82.

CHAPTER 3

PLANNING AND PREPARATIONS FOR OPERATION TORCH

Immediately following the attacks on Pearl Harbor in December 1941, Allied leaders met in Washington, DC for the Arcadia Conference to formulate the plan for the global war. American interests were split between defeating Japan and Germany, while Britain was struggling to survive and maintain vital lines of communication in the Mediterranean and abroad. The outcome of the conference was a “Europe first” strategy, with significant execution details between the two allies to still work out.⁸³ While not discussed in specifics during the Arcadia conference, the global strategy of Europe first meant the United States military would have to conduct amphibious operations within the next year somewhere in Europe or Africa. To ensure success of the future landing operations, the United States military would have to rapidly reorganize, equip, train, and plan to overcome the shortfalls in readiness from the interwar years.

At the beginning of 1942, the United States military found itself less than ideally situated to execute large scale combat operations on a global scale. The US Army quickly realized the need to reorganize the entire Army structure to match requirements of the massive mobilization efforts and the emerging requirement for an independent Air Force.⁸⁴ Not only did the military reorganize its highest levels of command, but entirely new units were constituted to solve the unique problems of modern warfare. After

⁸³ Matloff and Snell, *Strategic Planning for Coalition Warfare*, 113.

⁸⁴ John Millett, *The Organization and Role of the Army Service Forces*, United States Army in World War II: The Army Service Forces (Washington, DC: Center of Military History, United States Army, 1987), 37.

declaring war, the United States rapidly increased the procurement of materials needed for landing operations, carefully balancing the need for combatant ships, support vessels, and landing craft. The lack of amphibious watercraft in early 1942 affected the training readiness of the Army and the Navy, as new landing craft were sent overseas leaving home station training centers desperately short. New organizations developed entirely new training programs and procedures to take lessons learned from the interwar period and prepare newly assembled draft forces for combat. Mitigating all of this, mid-grade officers of the interwar years quickly climbed the ranks of the military service and discarded the inter-service rivalries that had hampered so much during the 1930s. As these new relationships developed over 1942 it allowed for greater and more effective joint planning between the service. These efforts in reorganization, material procurement, training and planning resulted in the successful embarkation of three separate corps sized elements sailing for the North African coast in October 1942.⁸⁵

Reorganization

At the outbreak of the war both the Department of the Navy and the War Department found their organizational structures lacking or needing to adapt to the framework of a truly global war. The Army needed to adapt to mobilize and train millions of draftees and deploy them to multiple theaters of war. The same general problems existed for the Navy along with the problem of a rapidly growing fleet that would operate in multiple theaters simultaneously. The Vinson-Walsh Act of 1940, also known as the “Two Ocean Navy Act” increased the fleet size to a level that major

⁸⁵ Howe, *Northwest Africa*, 83.

operations could be conducted in both the Pacific and Atlantic at the same time.⁸⁶

Admirals and Generals alike were called out of critical planning positions and advisory roles at the highest levels of leadership to take command of operational units.⁸⁷ While the Navy had some significant higher levels shifts in leadership at the outset of the war, it is the Army with their reorganization efforts from the highest levels to the lowest that affected operations in North Africa the most.

The Army's reorganization for war took a significant step on 9 March 1942 with the establishment of the Army Ground Forces (AGF), Army Air Forces (AAF), and Army Service Forces (ASF).⁸⁸ The complexities requiring this reorganization should have been evident at the conclusion of World War I, after General Pershing had established a "Services of Supply" section to support field armies in France and to control the technical services.⁸⁹ The delay in this reorganization for war time operations created friction throughout the Army as business practices and roles and responsibilities were adjusted. Most affected were the technical services such as the engineers, quartermasters, and transportation units which were vital to the upcoming invasion.⁹⁰

⁸⁶ Matloff and Snell, *Strategic Planning for Coalition Warfare*, 49; Nasca, *The Emergence of American Amphibious Warfare*, 260.

⁸⁷ Kuehn, *America's First General Staff*, 198.

⁸⁸ Chester Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, United States Army in World War II: The Technical Services (Washington, DC: Center of Military History, United States Army, 1991), 50.

⁸⁹ William Ross and Charles Ramanus, *The Quartermaster Corps: Operations in the War Against Germany*, United States Army in World War II: The Technical Services (Washington, DC: Center of Military History, United States Army, 1965), 3.

⁹⁰ Millett, *The Organization and Role of the Army Service Forces*, 40.

Engineers, transporters, and quartermasters were vital in not only mobilizing the Army but also in the future invasion of North Africa. The reorganization consolidated these branches and functions under ASF, while creating a direct support role and coordination with forces now under the command of both AGF and the AAF.⁹¹ The most extreme example of shifting roles and responsibilities that affected the landing operations were the changes to transportation functions of the Army. What was once a subordinate division of the Army G4, the Transportation division became the transportation service in April and then subsequently was reorganized into the transportation corps on 31 July 1942.⁹² With each reorganization leaders' staffs were disrupted from the important work being completed to prepare for global war and the landings in North Africa.

While the Army was still reorganizing its major commands the Joint Chiefs of Staff directed the Navy to form an amphibious fleet for operations in Europe. The Navy therefore established the Amphibious Force Atlantic Fleet on the 28th of April 1942, under the command of Rear Admiral Henry Hewitt. The fleet had command and staff organizations for both Navy and Army units under the fleet's control. A training school in Norfolk, Virginia was also set up for the new fleet. This school primarily focused on training leaders' technical skills needed for landing operations to include boat wave commanders, beach and shore party operations, and a course for commanders and staffs for planning and controlling operations.⁹³ Due to rapid mobilization and the overall

⁹¹ Kitchen, "The North African Campaign," 42.

⁹² Wardlow, *The Transportation Corps*, 50.

⁹³ Howe, *Northwest Africa: Seizing the Initiative in the West*, 60.

unpreparedness of the force the Army duplicated these efforts a month later in Massachusetts.

Further complicating reorganization were arguments between General Douglas MacArthur and Admiral Ernest King about the control of operations in the South Pacific during the early summer of 1942. Both officers had moved on from their roles of the 1930s, with MacArthur commanding Army forces in the Southwest Pacific, and King serving as the Chief of Naval Operations. While the debate was specifically about command of the upcoming island campaigns, at the heart of the arguments was the same disagreements from the 1930's as to whether control of amphibious operations should be the responsibility of the Army or Navy.⁹⁴ Admiral King's biographer George Dyer notes that it was only natural during this time for the Army to develop their own capabilities due to the poor readiness of the Navy at the outset of the war.⁹⁵ The lack of consensus and preparedness before the war made these early war conversations necessary but also very disruptive to the joint force trying to organize and prepare for war.

After restructuring the Army, the War department directed AGF on 22 May 1942 to develop the doctrine and training for all phases of amphibious operations, duplicating efforts the Navy was already conducting.⁹⁶ AGF immediately directed the establishment of an amphibious boat training center at Camp Edwards, Massachusetts, prepared to conduct training beginning on 15 July 1942. At almost the same time in England,

⁹⁴ Matloff and Snell, *Strategic Planning for Coalition Warfare*, 261.

⁹⁵ Dyer, *The Amphibians Came to Conquer*, 215.

⁹⁶ Marshall Becker, *The Army Ground Forces*, The Amphibious Training Center Study No. 22 (Washington, DC: Historical Section, Army Ground Forces, 1946), 3.

planners on the European Theater Command staff directed engineers within the theater to take responsibility for training all boat crews and shore parties for amphibious operations.⁹⁷ While these directives started the training necessary for building the readiness of the landing forces, they did not synchronize the training of other technical services vital for execution of future operations.

The AGF established the Army Amphibian Command on 10 June 1942 to fulfill the requirement to train units and refine doctrine for amphibious operations. The command was also tasked to oversee the activation and training of newly developed Engineer Amphibian Brigades that were specifically designed to support landing operations. On 15 June 1942, the 1st Engineer Amphibian Brigade was activated at Camp Edwards, MA under the Army Amphibian Command.⁹⁸ Later in 1942, the 2nd and 3rd Engineer Amphibian Brigades were also activated. All three brigades were organized with a single shore regiment to handle loading and unloading of equipment and supplies, and a single boat regiment to pilot and maintain landing craft. Later in the war the composition and names of these engineer amphibian brigades would change, after the lessons learned from Torch and operations in the Pacific. At their creation though, the engineer amphibian brigades were based on the assumption that the Army would

⁹⁷ Alfred Beck, Abe Bortz, Charles Lynch, Lida Mayo, and Ralph Weld, *The Corps of Engineers: The War against Germany*, United States Army in World War II: The Technical Services (Washington, DC: Center of Military History, United States Army, 1985), 31.

⁹⁸ *Ibid.*, 64.

undertake large shore to shore operations across the English Channel in 1943.⁹⁹ The brigades were organized and equipped to support landing a standard army division in a direct support role. In total six engineer amphibian brigades, or engineer special brigades as they would later be called, were constituted to support the war effort, with the majority serving in the Southwest Pacific under General MacArthur.¹⁰⁰ The late establishment of these organizations left little time to prepare for operations in North Africa that were four months away.

The newly established Transportation Corps also had organizational challenges to overcome following its activation in July 1942. Throughout the interwar period the Army always had the responsibility for the operation of port facilities during overseas expeditions.¹⁰¹ This capability was critical to the Operation Torch plan which relied upon the seizure of deep-water port facilities to bring material and logistics to the battle. To fulfill the requirement to operate ports facilities the Transportation Corps constituted port battalions that specialized in unloading vessels and organizing the materials and supplies into dumps for movement to the frontlines. The 3rd Port Battalion was formed in sufficient time and integrated into planning with the Central Task Force. However, other

⁹⁹ William Heavy, *Down Ramp: The Story of the Army Amphibian Engineers* (Nashville, TN: The Battery Press, 1988), 38.

¹⁰⁰ Ibid.

¹⁰¹ Joint Board, *Joint Action of The Army and The Navy: 1927*, 12. Same specifications are found in the 1936 versions and both the Army and Navy service specific doctrine published before the War.

units were formed too late to have any significant impact on landing operations.¹⁰² While vital to the upcoming operation, the oversight and lack of emphasis on this critical capability would affect not only planning but execution as will be examined later.

These significant reorganizations in the United States military at the outbreak of the war were fundamental to execution of the global war and without these changes Operation Torch would have been missing several key capabilities. The changes in the organization and the establishment of the technical service units to support the landing were vital. The combination of these organizational changes with equipment, training, and planning that will be discussed shortly were essential to ensure operational success.

Materials and Supplies

The late reorganization of the military for a global war effort is only one symptom of the overall lack of preparedness of the military in 1942. Another major concern was the late procurement of materials and supplies needed for overseas expeditions. Specifically, the limited number of landing craft and transports were of vital concern for military planners. During the Arcadia conference in December 1941, planners reported that the global transportation available to the United States had the capacity to move approximately 25,000 soldiers, the equivalent of one division. Estimates for the following three months' production provided an additional transportation capacity for 57,000 troops; however, split across multiple theaters of war this lack of shipping posed a

¹⁰² Junias Jackson, "The Impacts of Movement Control in WWII Mediterranean and Western European Theaters of Operation," (Master's thesis, US Army Command and General Staff College, 2021), 25.

significant issue as it failed to meet the requirements of the likely operations in both Europe and the Pacific.¹⁰³

To rectify these problems and develop a strategy, joint planners met at the White House on 4 April 1942 to establish production goals of transports and landing craft. Specific to landing operations, British planners advocated for the United States to prioritize ocean going tank lighters and larger landing craft. This emphasis by the British correctly predicted the need for these types of ships to support the modern mechanized forces in upcoming operations. The meeting established a total production goal for the European theater at 8,200 landing craft. The short term goal for 1942 was established at 2,500 landing craft with 2,000 of those being the larger Landing Ship Tank (LST).¹⁰⁴ Following the meeting, however, the prioritization of tank lighters was never executed due to the threat of U-Boats in the North Atlantic requiring production to focus on destroyers.¹⁰⁵ The shortage of specialized ocean going tank landing craft reduced capacity to transport mechanized forces to North Africa, and affected Patton's landing force as will be discussed shortly.

Further complicating the logistical preparation for Torch was the lack of a specific campaign plan in early 1942. During the spring of 1942 logistical planners were procuring supplies against Operation Bolero, the buildup of military forces in England.

¹⁰³ Matloff and Snell, *Strategic Planning for Coalition Warfare*, 108.

¹⁰⁴ Ibid., 193.

¹⁰⁵ Ibid., 193, 312.

Supplies and materials were sent to depots in England for the assumed cross channel invasion of either late 1942 or 1943.¹⁰⁶

Once the plan for Torch was issued, quartermasters had to quickly divert and reorganize supplies from supporting Bolero. Supplies ordered against Bolero planning in June, were then critical to Torch and were still enroute from New York when the Center Task Force (CTF) in Scotland began loading ships. Spread across the southwest of England, where planners had anticipated embarkation for a cross channel invasion, were 101,600 tons of supplies needed in Liverpool for Torch. Technical services troops quickly redirected arriving supplies and moved those already in England northward. Incredibly, the supplies for the North African campaign would come together during the month of October during the final embarkation of transports.¹⁰⁷

The lack of materials and supplies, especially large tank landing craft, at the outbreak of the war constrained military planners in 1942. The efforts to correct these issues during the first six months of the war were vital not only to the landings in North Africa but the Pacific as well. While supply issues existed at the time of embarkation, the lack of transports and landing craft overshadowed the situation requiring planners to alter the Operation Torch plans.

Planning

As the Army was mobilizing, reorganizing, and obtaining necessary supplies for Operation Torch, senior leaders were busy planning for global coalition warfare. On the

¹⁰⁶ Ross and Ramanus, *The Quartermaster Corps*, 30.

¹⁰⁷ *Ibid.*, 43.

18th of July 1942, President Roosevelt sent General George Marshall and Admiral Ernest King to London to refine the campaign plan for Europe with British military leaders. American leaders advocated for a cross channel invasion at the direction of the President; however, they compromised with British planners who pressed for an indirect approach to Europe through North Africa.¹⁰⁸ Roosevelt agreed with the military's plan for an attack on North Africa and Operation Torch on 25 July 1942.¹⁰⁹ Immediately following this decision operational level planning commenced between the allied militaries.

The United States and Great Britain understood both countries' limited ability to project combat power over the shore early during the planning process. The British may have best understood their own limitation in their planning. Their assessment of this limitation resulted in their plan focusing on securing a deep-water port within 24 hours of landing to continue operations.¹¹⁰ The British plan with the Eastern Task Force (ETF) specified that assault troops would only carry enough supplies ashore to operate within 10 miles of the beach.¹¹¹ Plans for the Western and Center task forces also focused on the capture of ports at Casablanca and Oran respectively but were less overt in expressing the

¹⁰⁸ William Breuer, *Operation Torch: The Allied Gamble to Invade North Africa* (New York: St. Martin's Press, 1985), 8.

¹⁰⁹ Howe, *Northwest Africa*, 14.

¹¹⁰ Ian Stanley, Ord Playfair, C.J.C. Molony, F. C. Flynn, and T. P. Gleave, *The Mediterranean and Middle East*, vol. 4, *The Destruction of Axis Forces in Africa* (London: Her Majesty's Stationery Office, 1966), 120.

¹¹¹ *Ibid.*, 141.

limitation to sustain the force over the shore.¹¹² The need for intact ports was of such vital importance that in October plans were issued for direct assaults into the ports at Oran and Algiers. General Dwight Eisenhower and his staff were concerned with the distance and time required by landing forces to move from beachheads to these ports.¹¹³ While not the strategic objectives of Operation Torch, the assessment by planners that the ports were of vital operational importance to the operation was correct due to the inability to sustain the force over the beach.

In order to conduct planning with General Eisenhower's European Theater combined staff, Major General George Patton, who would command the Western Task Force (WTF), traveled to England on 9 August 1942. Both Generals Eisenhower and Patton shared early pessimism about the operation; however, they quickly become champions of the plan. The US Naval planners, however, quickly provided the joint planning staff numerous issues operating in the Mediterranean with the threat of German Warships. The hesitancy of the Naval leaders and their lack of commitment to finding solutions frustrated Patton and caused him to finally erupt in anger on 11 August saying "I am going to do it, warships or not-and if I have to go alone in a row boat."¹¹⁴ This early breakdown in planning due to inter-service rivalries resulted in the remainder of the planning session in England being less than productive.

¹¹² Headquarters, 1st Infantry Division, "Torch Operation: Field Orders," (Ste Barbe du Tlelat, 10 October 1942.

¹¹³ Dwight Eisenhower, "Eisenhower Report on Torch," (Department of the Army, Washington, DC, 1943), 9.

¹¹⁴ Breuer, *Operation Torch*, 15.

When the Army and Navy leaders of the WTF returned to the United States in August 1942, they discarded one of the most critical lessons from the interwar years, that landing operations were an inherently joint venture. Patton kept his headquarters in Washington, DC upon his return from England on 21 August, while Admiral Kent Hewitt and his naval planners returned to Norfolk, Virginia. In further joint planning sessions Patton was documented as having more explosive outbursts resulting in Admiral Hewitt through Admiral King requesting Patton's removal from the upcoming operation. General Marshall declined this action and the two headquarters continued to plan geographically separated through the month of September.¹¹⁵

Over the next month Patton and his staff traveled to Norfolk on numerous occasions to continue planning with Admiral Hewitt and his staff. During this time a significant change in attitude emerges in Patton's Journal. Specifically, on 24 September he writes that "the plan has finally [been] settled and I feel very calm and contented," indicating relations were mending between Army and Navy leaders before the invasion.¹¹⁶ Further correspondence from Patton throughout the remainder of planning and during execution supports the notion that a relationship of professionalism and respect between the two leaders developed and placed the issues of inter-service rivalries behind them at the critical hour.¹¹⁷ The Patton-Hewitt relationship was a key to success in North Africa.

¹¹⁵ Breuer, *Operation Torch*, 32.

¹¹⁶ Blumenson and Patton, *The Patton Papers*, 86.

¹¹⁷ *Ibid.*, 91-95.

The Joint plan for Operation Torch was finally published on 13 October 1942. The final plan specified three separate landing task forces.¹¹⁸ The ETF, primarily composed of British forces, would land around Algiers. The CTF sailing from England on British ships but formed around the 1st Infantry Division of the United States would land near the Port of Oran, while Patton's WTF would land around Casablanca along the Atlantic coast. Unified under the command of General Eisenhower and a combined staff, the different task forces developed unique plans to account for local conditions and resources available.

The WTF was unique for Operation Torch as it was solely an American endeavor. Sailing from ports of embarkation on the eastern seaboard of the United States, the task force sailed directly to the shores of Northwest Africa. The final operations order for Torch tasked the Navy to unload landing craft at the beach and the Army was made responsible for unloading landing craft at docks.¹¹⁹ This arrangement was a departure from joint doctrine before the war which specified the responsibility for shore party duties to the Army, specifically the engineers and labor forces required to organize supplies and equipment arriving at the beach.¹²⁰ While the joint doctrine was not explicitly clear who would physically unload the landing craft, the tasks given to the

¹¹⁸ Howe, *Northwest Africa*, 39.

¹¹⁹ Joint U.S. Chiefs of Staff, J.C.S. 127, *Joint Army and Navy Plan for U.S. Participation in Operation "Torch," Short Title – "Roofree"*. (Washington, DC: Joint U.S. Chiefs of Staff, 1942), 4.

¹²⁰ Joint Board, *Joint Action of The Army and The Navy*, 1936, 107.

Navy in the manual does not reference labor troops or functions that would imply unloading or organizing the supplies on the beach.¹²¹

Further complicating the confusing situation of roles and responsibilities on the beach were variations of service specific doctrine. At the time of planning for Operation Torch, the Navy doctrine published in 1938 was based on the assumption that the fleet marine force would be the principal landing force for the Navy. This assumption of a single service conducting the landing operation caused the doctrine to poorly delineate the roles of the shore and beach parties as had been done in the joint doctrine.¹²² Army doctrine published in 1941 specified the task of “unloading material of the landing force” to the Navy’s beach party which was in conflict with the Joint doctrine.¹²³ While this difference in which service unloads the landing craft seems trivial, it is not a simple task. Clear delineations of the task were necessary to obtain supporting equipment and to train units to conduct this task. While the final plan as mentioned earlier tasked the unloading of the landing craft to the Navy, the written order does not correct the lack of preparedness for either organization to execute the task in North Africa. The fact that neither service had accepted the task in doctrine as their own and prepared troops to perform these duties did affect the execution in North Africa as will be examined later.¹²⁴

¹²¹ Joint Board, *Joint Action of The Army and The Navy*, 1936, 107.

¹²² Office of Naval Operations, F.T.P. 167, 34.

¹²³ United States Army, FM 31-5, 1941, 24.

¹²⁴ Howe, *Northwest Africa*, 61.

Further complicating matters for the WTF plan was the limited availability of shipping from the United States for the Operation. In mid-September, after significant planning had already been conducted, transportation planners detailed the need to cut either 67,000 troops or 50% of equipment from the invasion plan to fit on available shipping. The original plan prepared by the WTF was for twenty different quartermaster and technical service units to be a part of the initial landing operations in early November.¹²⁵ On 27 September, Major General Mark Clark, Deputy Commander under General Patton, made the decision to cut all Service of Supply troops from the initial sailing along with all but absolutely essential vehicles to preserve space for combat troops and equipment.¹²⁶

Combining the differences in doctrine and plans for Torch with the late change in units sailing with the assault force, a significant problem arose for the WTF. While the Navy was ordered to unload the equipment and supplies from landing craft at the beach in the plan, the inland movement and then organization and distribution of the supplies relied upon quartermaster soldiers who were no longer sailing with the force.¹²⁷ This arrangement forced planners to shift engineer forces that were task organized to support combat operations to serve as beach parties during the landing. The 36th and 540th Combat Engineer Regiments were tasked to conduct shore party operations; however,

¹²⁵ Ross and Ramanus, *The Quartermaster Corps*, 46.

¹²⁶ Richard Matson, "No Tail for the Strategic Dog: Marginalization of Logistics During Operation Torch, Invasion of North Africa," (Master's thesis, US Army Command and General Staff College, 2014), 38.

¹²⁷ Joint U.S. Chiefs of Staff, J.C.S. 127, 4.

they were under-resourced with equipment and received minimal training to complete the task.¹²⁸

The CTF embarked on British shipping employed a significantly different plan for operations across the shore using the 1st Engineer Amphibian Brigade at their disposal. Assigned to the brigade was the 531st Engineer Shore Regiment which was task organized to support the 1st Infantry Division to control operations on the beach.¹²⁹ Specifically designed, trained, and equipped to complete the mission, the engineer formation was ordered to handle the arrival of equipment and supplies both over the shores and at the docks once seized. Under the guidance of Rear Admiral Andrew Bennett of the US Navy, the CTF also planned for an advance port group consisting of 82 Navy, 3 Marine, and 9 Army officers along with 520 Navy, 30 Marine, and 209 Army enlisted personnel to bolster operations at the Port of Oran and three other small ports in the region.¹³⁰ The CTF closely followed Joint Doctrine in their planning, deviating in minor ways where needed to fill capability gaps derived from the multinational nature of the Task Force.

While the final plans were issued relatively late in October, the reasons for this delay can likely be attributed to the joint and combined nature of the planning team. Subordinate plans for the multiple landing and naval task forces indicate significant parallel planning occurred during the timeframe resulting in rather detailed plans being

¹²⁸ Howe, *Northwest Africa*, 121.

¹²⁹ Headquarters, 1st Infantry Division, "Torch Operation: Field Orders," 2.

¹³⁰ Howe, *Northwest Africa*, 50.

issued before the combined staff's plan. Only slightly more than three months after the decision to proceed with Torch the combined staff issued a complete plan that detailed three separate major landing forces, departing from both England and the United States, and arriving off the coast of Africa to assault twenty-one separate beaches on a frontage of roughly 1200 miles.¹³¹ The seemingly small number of issues in the plan addressed here, however, would have significant impacts during execution of the operation to be discussed later.

Training

The final important component of preparation for Torch was the training conducted by the joint force prior to the operation. As the country mobilized for war, newly drafted soldiers required specialized training for not only combat but also amphibious operations. They required training on specialized equipment, such as cranes and other material handling equipment, along with the procedures and practices of amphibious operations, some of which had not yet been fully developed. Complicating the matter at hand was the reorganization of the Army occurring during 1942 along with the lack of equipment, namely landing craft, to conduct the training.

The Army's amphibious training center at Camp Edwards issued its first training directive on the 12th of June 1942. The directive was very broad and lacked sufficient details to guide training during the summer of 1942.¹³² Cadre learned further lessons

¹³¹ Michael Walling, *Bloodstained Sands: US Amphibious Operations in World War II* (New York: Osprey Publishing, 2017), 73.

¹³² Becker, *The Army Ground Forces*, 7.

throughout the summer during the training and published more detailed guidance, but this was too late for any effect on Operation Torch. The second set of guidance was published on the 24th of October, after a majority of units had sailed for North Africa. The most notable addition was a requirement for the “termination of training by a night landing problem of sufficient duration to require establishment of supply dumps on the beach and forwarding of supplies to units on the beach headline.”¹³³ This foreshadowing of issues to come during Operation Torch should have been addressed with lessons learned from the interwar exercises, but the movement of logistics and combat power over-the-shore been not been fully rehearsed.

¹³³ Becker, *The Army Ground Forces*, 9.



Figure 1. Army Engineers Training with Sommerfeld Matting at Camp Edwards Massachusetts

Source: Blanche Coll, Jean Keith, and Herbert Rosenthal, *The Corps of Engineers: Troops and Equipment*, United States Army in World War II: The Technical Services (Washington, DC: Center of Military History, United States Army, 1988), 375.

While the Army had already commenced training of Amphibian brigades at Camp Edwards, planners came to an agreement on “Amphibious Training and Organization” on the 18th of July.¹³⁴ With time short the agreement was for the Army to prepare three Engineer Amphibian Brigades and a Corps of two or more Divisions for amphibious operations. This agreement would never be approved by the Joint Chiefs of Staff but provided the basis for training to accomplish Operation Torch.

¹³⁴ Matloff and Snell, *Strategic Planning for Coalition Warfare*, 314.

The 1st Engineer Amphibian Brigade and the 1st Infantry Division were ordered to England before their training in the United States was completed. The 1st Infantry Division departed from New York aboard the Queen Mary on the night of the 1st of August 1942.¹³⁵ 1st Engineer Brigade received orders on the 23rd of July for departure from New York on the 6th of August.¹³⁶ The shortage of landing craft resulted in both units departing for England partially trained, and neither had rehearsed any large-scale supply operations. The history of the Amphibious Center notes this deficiency as “one of the most important points brought out” by the training.¹³⁷

Further complicating training completion was the diversion of technical service troops to theater opening tasks upon arrival in Europe in 1942. Engineers of the 1st Brigade and other combat engineer units were unable to find time to complete required training, reporting 90% of their time and effort was spent on base construction and other tasks.¹³⁸ Other technical service units such as quartermasters suffered the same issues affecting their readiness for Operation Torch.

As part of the CTF, one company of engineers from the 531st Engineer Shore Regiment, 1st Engineer Amphibian Brigade, were task organized to each of the regimental combat teams within 1st Infantry division on the 4th of October. They were

¹³⁵ H. R Knickerbocker, Jack Thompson, Jack Belden, Don Whitehead, A. J. Liebling, Mark Watson, Cy Peterman, Iris Carpenter, R. E. Dupuy, and Drew Middleton, *Danger Forward: The Story of the First Division in World War II* (Nashville, TN: The Battery Press, 1980), 6.

¹³⁶ Heavy, *Down Ramp*, 16.

¹³⁷ Becker, *The Army Ground Forces*, 53.

¹³⁸ Beck et al., *The Corps of Engineers*.

ordered to embark their troops and equipment on transports and to conduct final rehearsals a few days later. Orders from the CTF directed the engineers to conduct rehearsals for landing personnel and equipment, building beach exits, establishing dumps, and traffic control procedures.¹³⁹

As part of the final rehearsals the 1st Infantry Division with the 1st Engineer Amphibian Brigade attached conducted operation “Mosstrooper” beginning on the 18th of October 1942 around Glasgow.¹⁴⁰ General Eisenhower observed these final rehearsals and noted that junior officers were unprepared and incompetent, specifically recalling one captain with a bazooka who informed the supreme allied commander that he and his men didn’t know how to use it.¹⁴¹ MAJ Derril Daniel a battalion executive officer in the 26th Infantry Regiment noted after the operation that the training was not suitable for the upcoming operation; it was raining the whole time and water was abundant unlike North Africa where they were headed.¹⁴² As the task forces sailed toward their objectives in North Africa General Eisenhower wrote to General Marshall on the 7th of November “If Patton encounters any real resistance, he is going to have a tough time of it because landing problems alone are enough to occupy his full attention.”¹⁴³ Whether this was in

¹³⁹ Howard Devoe, *History of the HQ and HQ Co 1st Engineer Amphibian Brigade and the 531st Engineer Shore Regiment and Succeeding Units Formed 15 June 1942* (Syracuse, NY: H. G. DeVoe, 1983), 3.

¹⁴⁰ Knickerbocker et al., *Danger Forward*, 17.

¹⁴¹ Breuer, *Operation Torch*, 67.

¹⁴² Derrill Daniel, “Landings at Oran, Gela, and Omaha Beaches: An Infantry Battalion Commanders Observations,” (Armed Forces Staff College, Norfolk, VA, 1948).

¹⁴³ Blumenson and Patton, *The Patton Papers*, 103.

reference to assault forces attacking the beach, or projecting combat power ashore it is not known. Either way, Eisenhower perceived the execution of the landing operation, even if unopposed, to be of great concern.

Final rehearsals and training for the WTF that was still on the East Coast went even worse than what was observed in Scotland. 2nd Armored Division conducted two iterations of rehearsals between the 10th and 22nd of October. The first iteration on the 10th sailed to the rehearsal without provisions loaded on ships, while the second half of the landing force embarked on their transports at Hampton Roads. The two halves switched a few days later for the second iteration.¹⁴⁴ Naval personnel assigned to the task force operated the small boats for the exercise and during the landing rehearsals all but one boat got lost on the way to their specified landing beaches.¹⁴⁵ It took until noon the following day to find all the troops scattered along the beaches. To rectify this issue Major General Harmon, commander of the 2nd Armored Division, with the permission of Admiral Hewitt, directed training for the navy coxswain during the transatlantic sailing to improve their navigation skill.¹⁴⁶ Due to the fact that the ships participating in the exercise were either not loaded or had no time to reload after the training, the rehearsals did not include over-the-shore logistics operations that needed to be executed two weeks later.

¹⁴⁴ Howe, *Northwest Africa*, 68.

¹⁴⁵ Breuer, *Operation Torch*, 65.

¹⁴⁶ *Ibid.*, 86.

When the assault convoys sailed from Scotland and the United States on the 22nd and the 23rd of October respectively, the discussion of preparations for Operation Torch would logically conclude.¹⁴⁷ However, with the poor state of organization of the United States military in 1942, the departure of the assault force is not the final discussion of preparations. Constituted on the 19th of October, only days before assault forces sailed, the Atlantic Base Section was formed to provide theater logistical support to the Moroccan area of operations. Even more untimely the Mediterranean Base Section for the CTF was constituted on the 2nd of November 1942, only six days before the landings.¹⁴⁸ While neither organization would likely have sailed with assault forces, even if adequate shipping was available, the untimely formation of these organizations did not allow for any joint planning or policies to be established with the headquarters of the different task forces they would support. Adequate shipping was not available for weeks and the Atlantic Base Section would not arrive in Casablanca until the 24th of December 1942.¹⁴⁹

The miscalculation of troop basis during Operation Torch is analyzed well by other authors. Richard Matson most clearly articulated this issue for sustainment forces in his work highlighting that troop basis were limited to division support forces and did not accurately capture the need for higher echelon and theater support.¹⁵⁰ Had organizations

¹⁴⁷ Breuer, *Operation Torch*, 82.

¹⁴⁸ United States War Department, General Staff, *Logistical History of NATOUSA-MTOUSA* (Naples, Italy, 1945), 20.

¹⁴⁹ *Ibid.*, 21.

¹⁵⁰ Matson, “No Tail for the Strategic Dog,” 24.

such as the Atlantic Base Section been formed well before the operation, planning may have mitigated the issue of troop basis for rear echelon support.

The actions of military commanders and planners between December 1941 and November 1942 were some of most incredible accomplishments of World War II. Mobilizing the American military, reorganizing the Army and the Navy for war, gathering equipment and supplies, and planning for a major coalition operation were significant challenges each in their own regards. The actions conducted during this period, however, should have been completed long before the war began.

Had preparations for amphibious operations been more robust during the late 1930s, the time between the attacks at Pearl Harbor and the landings in North Africa could have been spent refining plans and rehearsing. Ample Engineer Amphibian Brigades, with proper equipment, would have been available during the spring of 1942 and could have been task organized to not just the CTF but the WTF as well. Doctrine would have had time to propagate throughout the force and more leaders would have been prepared to plan and execute the operation. Without these actions being started sooner, the nine months available was insufficient to organize, train and equip the forces needed to fully support Operation Torch.

CHAPTER 4

THE NORTH AFRICA LANDINGS

The differences in plans for the three assault forces sailing to North Africa in early November 1942 provides an opportunity to understand the effects of actions taken during both the interwar years and the mobilization for World War II. The objectives of the landings during Operation Torch were the seizure of both port facilities and logistical nodes needed to project combat forces to the east and defeat the German Army. The difference in how each task force implemented doctrine, conducted training, task organized forces, and planned over-the-shore operations affected the ability of maneuver forces to seize their objectives. The greater emphasis by the CTF on over-the-shore operations around the port of Oran played a crucial role in their greater success when compared to the other landing forces during Operation Torch.

Decisive to Operation Torch was the ETF's attack east towards Tunis to defeat the German Army. The ETF, however, was primarily a British venture, with the naval component almost entirely British and the landing force predominantly British. The doctrine, training, organization, and material readiness of this force differed significantly from the Americans due to difference in the two nations' experiences and preparations for war. Opposition in Algiers was also far less intense than the landings around Oran and Casablanca which allowed port operations to start sooner for the British. The rapid seizure of the port at Algiers limited the need for significant over-the-shore logistical

operations.¹⁵¹ For these reasons this study will not compare the outcomes of the ETF to that of the center or western ones that were primarily American landings.

By comparing the outcomes of the Center and Western Task Forces' operations, conclusions can be drawn about the effects of the task forces' adherence to doctrine, task organization, training, and material readiness. Over-the-shore logistics lasted for several days in both cases and provides ample evidence to analyze the effectiveness of the two plans to project a large army from the sea. While the CTF was supported by a British naval component, the landing forces in both of these operations were comprised of almost entirely United States Army forces. Both task forces struggled with logistics as could be expected during the first major operation of the war; however, the CTF prioritized technical service forces and planning, which allowed it to outperform the WTF during execution.

¹⁵¹ Stanley et al., *The Mediterranean and Middle East*, vol. 4, 141.

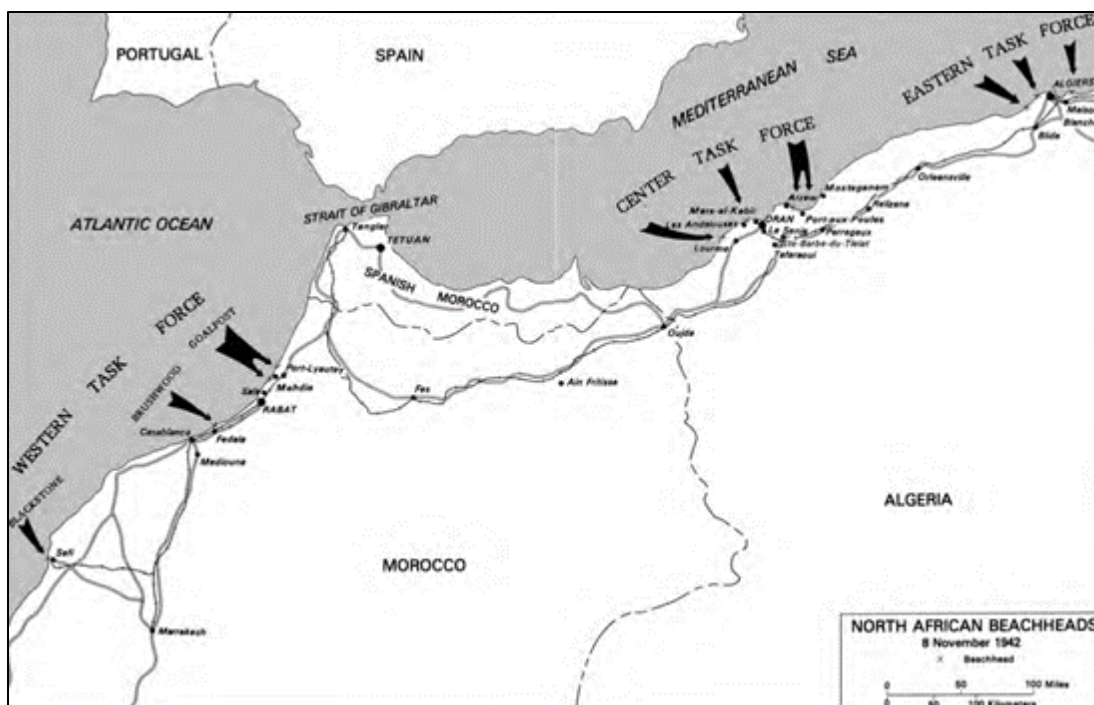


Figure 2. Operation Torch Landings

Source: Alfred Beck, Abe Bortz, Charles Lynch, Lida Mayo, and Ralph Weld, *The Corps of Engineers: The War against Germany*, United States Army in World War II: The Technical Services (Washington, DC: Center of Military History, United States Army, 1985), 70.

Western Task Force Landing

The WTF under the command of Major General George S. Patton was tasked to attack the Atlantic coast of French Morocco and to seize the deep-water port at Casablanca. The strategic purpose of the landing was to posture a force to attack Spanish Morocco in the North, to prevent a disruption to allied shipping through the Straights of Gibraltar should Spain join the Axis powers. To accomplish this objective, it was essential to seize Casablanca, which would allow the building of combat power for an attack northward.

Patton divided his forces into three sub task forces, which from north to south were codenamed “Goalpost,” “Brushwood,” and “Blackstone.” The arrangement of the sub task forces within the WTF and the general task organization are depicted below in figure 3. Constituted around the 3rd and 9th Infantry Divisions and the 2nd Armored Division, each sub task force was roughly division strength. The divisions were task organized with one to three regimental combat teams, each having an organic service company, antitank company, cannon company and three infantry battalions.¹⁵² The regimental combat teams had sufficient organic service troops to support the infantry formations based on prewar planning; however, the WTF’s divisions were notably lacking service support and technical service troops task organized at the division level.¹⁵³ The limitation of quartermaster and transportation units was the result of limited shipping available in 1942. Without a full complement of divisional support units, a battalion of combat engineers from either the 36th or 540th engineer regiments was tasked organized to each sub task force. They were tasked to perform not only shore party duties but were also responsible for initial operation of inland dumps and supply operations, far exceeding their capabilities.

¹⁵² Kent Greenfield, Robert Plamer, and Bell Wiley, *The Army Ground Forces: The Organization of Ground Combat Troops*, United States Army in World War II: The Technical Services (1987; repr., Washington, DC: Center of Military History, United States Army, 2004), 276.

¹⁵³ *Ibid.*, 271.

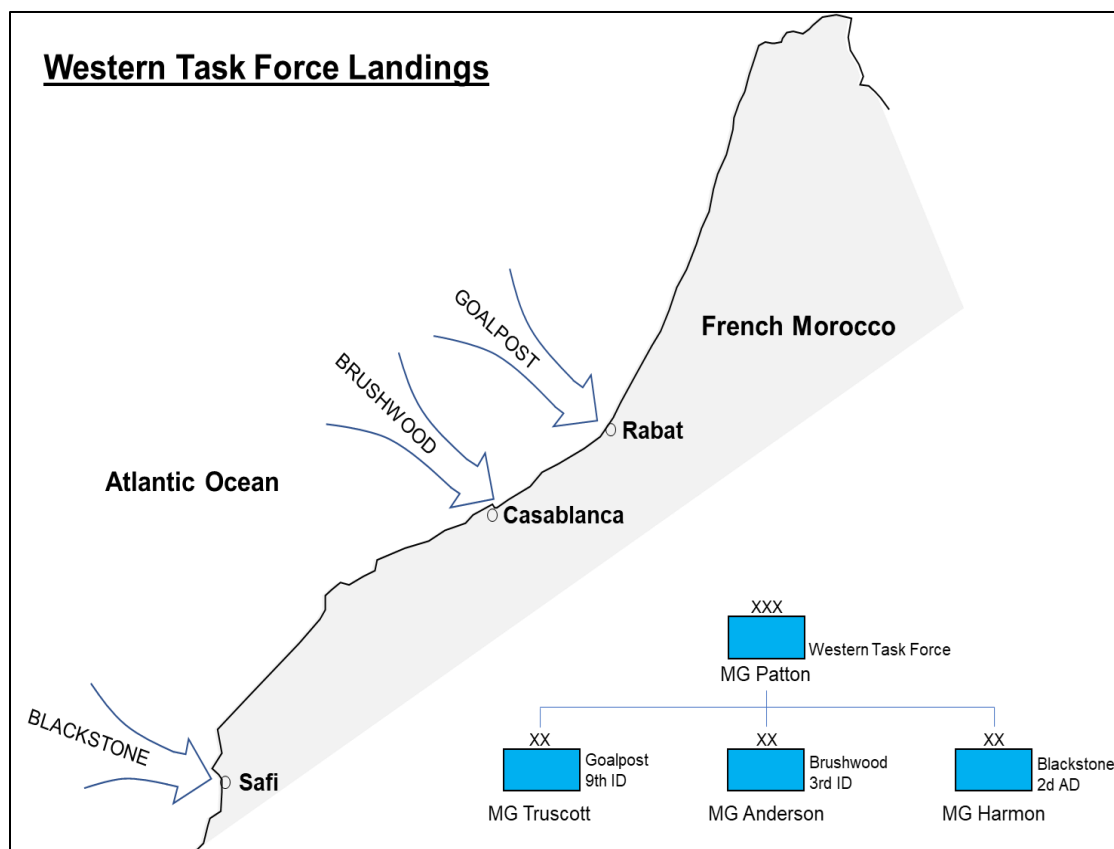


Figure 3. Western Task Force Attack Plan and Task Organization

Source: Created by author.

An examination of the engineer units performing shore party duties between the Center and Western Task Forces highlights a significant difference. Unlike the engineer amphibian brigade that was part of the CTF, the engineers of the 36th and 540th were neither specially trained nor organized for over-the-shore operations.¹⁵⁴ Additionally, the assault convoy for the WTF notably lacked any port battalions or other technical service forces that would mitigate the shortfalls in engineer capabilities. The difference between

¹⁵⁴ Beck et al., *The Corps of Engineers*, 72.

the task organizations of the Center and Western task forces was the most notable difference that caused performance differences during the landings. Had training exercises before the war been conducted at the division scale, lessons about effective task organization would have been learned and included in the WTF plan.

Further complicating matters just prior to landings were issues with doctrine. Before sailing Navy planners presented the WTF with overly detailed landing instructions. Major General Ernest Harmon, commander of the 2nd Armored Division and Admiral Lyal Davidson met to discuss the “telephone book” sized set of instructions and to simplify the arrangements between their two commands. It is unknown if the large document provided by naval planners was simply the current Navy’s doctrine, Fleet Training Publication 167, or some more specific instructions. Either way, after deliberations, the leaders reduced the publication to one single typed sheet of instructions to be disseminated to their subordinate commands.¹⁵⁵ This conference and the short document produced clarified the roles and responsibilities on the beach and made the Army’s landing force responsible for unloading equipment from the landing craft. The variations between service and joint doctrine, the initial plan, and this final set of instructions demonstrates either a lack of understanding by leaders that joint doctrine existed on the matter or an indifference to doctrinal manuals during this time period.

While similar in a broad perspective, each sub task force had a unique mission and task organization within the broader WTF landings. The northern most sub task force, codenamed “Goalpost,” was formed around the 9th Infantry Division and

¹⁵⁵ Breuer, *Operation Torch*, 85.

commanded by Major General Lucian Truscott. Table 2 shows the task organization and composition of men and vehicles for Goalpost. The task force was assigned landing beaches near the city of Rabat and Port Lyautey with the objective of securing the port and a critical airfield to the north of the city.¹⁵⁶ Task Force Goalpost's plan detailed five separate beaches and simultaneous landings at all locations, both north and south of the city.¹⁵⁷ 1st Battalion of the 540th Engineer Regiment provided shore parties to support the Goalpost landings. Engineers were task organized equally among the different maneuver units and controlled by the battalion landing teams. While approximately a company of engineers supported each regimental sized unit, they were separated across five different beaches preventing elements much larger than a platoon from working together. Without central control of all shore party operations, the thin spread of engineers limited the ability to command and control or mass efforts at any one place.¹⁵⁸

¹⁵⁶ Howe, *Northwest Africa*, 151.

¹⁵⁷ Ibid., 150.

¹⁵⁸ Beck et al., *The Corps of Engineers*, 71.

Table 2. Personnel and Vehicles Assigned to Goalpost

Unit	Personnel			Vehicles
	Total	Officers	Enlisted	
Total-----	9,079	525	8,554	881
9th Infantry Division				
1st BLT, 60th Infantry ^a	1,345	61	1,284	118
2d BLT, 60th Infantry ^b	1,268	54	1,214	117
3d BLT, 60th Infantry ^c	1,461	57	1,404	118
Other 60th Infantry Troops ^d	1,318	77	1,241	224
Armored Landing Team				
1st Battalion (reinforced), 66th Armored Regiment ^e	919	40	879	163
Other Force "Z" Personnel				
Detachemnts, XII Air Support Command	1,936	139	1,797	103
692d-697th Coast Artillery (AA) Batteries	448	30	418	0
Detachment of:				
66th Engineer Company (Topographic)	5	0	5	0
1st Armored Signal Battalion	3	0	3	1
9th Signal Company	68	2	66	10
122d Signal Company (Radio Intelligence)	26	1	25	4
163d Signal Company (Photographic)	6	1	5	1
239th Signal Company (Operational)	35	1	34	4
56th Medical Battalion	36	1	35	0
2d Broadcasting Station Operational Detachment	30	11	19	5
Counterintelligence Group	16	1	15	0
Prisoner Interrogation Group	21	6	15	0
Civil Government Personnel	4	4	0	0
Force Headquarters	46	10	36	10
Submarine Markers	30	6	24	0
Harbor Obstruction Experts	40	20	20	0
Naval Personnel	18	3	15	0
a) Including 1st Platoon, Battery D, 443d Coast Artillery (AA) Battalion b) Including 3rd Platoon, Battery D, 443d Coast Artillery (AA) Battalion c) Including 4th Platoon, Battery D, 443d Coast Artillery (AA) Battalion d) Including 1st Battalion, 540th Engineer Regiment e) Including 1st Platoon, Battery B, and 1st Platoon, Battery C, 443rd Coast Artillery (AA) Battalion				

Source: George F. Howe, *Northwest Africa: Seizing the Initiative in the West*, United States Army in World War II: The Mediterranean Theater of Operations (Washington, DC: Center of Military History, United States Army, 1993), 151.

In the center was Patton's main effort. Codenamed "Brushwood" and formed around the 3rd Infantry Division commanded by Major General Johnathan Anderson, their main objective was the deep-water port at Casablanca. Most of the task force was ordered to land around the smaller city of Fedala to the north, which had a small harbor that could accommodate landing craft and protect them from the high seas of the

Atlantic.¹⁵⁹ The forces would then attack from Fedala to the south to seize Casablanca. The 1st and 3rd Battalions of the 36th Engineer Regiment provided shore party support to Brushwood's regimental landing teams as noted in table 3.¹⁶⁰ While one engineer battalion for each regimental landing team is greater support than seen anywhere else in Operation Torch, the additional waves of the 15th Infantry, and armored forces makes this support equal to or less than other landings. The total volume of troops and supplies coming ashore with the task force required more support than the two combat engineer battalions could provide. Additionally, the task organization for this landing area had no other service support units to establish the logistical operations at the beach.¹⁶¹

¹⁵⁹ Howe, *Northwest Africa*, 41.

¹⁶⁰ Beck et al., *The Corps of Engineers*, 69.

¹⁶¹ Howe, *Northwest Africa*, 122.

Table 3. Personnel and Vehicles Assigned to Brushwood

Unit	Personnel			Vehicles
	Total	Officers	Enlisted	
Total-----	19,364	1,087	18,277	1,732
3rd Infantry Division				
1st RLG (reinforced), 7th Infantry ^a	5,245	224	5,021	443
2d RLG(reinforced), 30th Infantry ^b	5,245	224	5,021	443
15th Infantry	3,838	178	3,660	341
Headquarters, Headquarters Company, Signal Company, 3d Infantry Division	499	56	443	61
Headquarters Task Force "A"	317	93	224	54
Armored Landing Team				
1st Battalion (reinforced), 67th Armored Regiment ^c	875	38	837	148
Other Force "Y" Personnel				
Detachments, XII Air Support Command	1,485	166	1,319	91
436th Coast Artillery (AA) Battalion	532	32	500	79
443d Coast Artillery (AA) Battalion (One and a half platoons only)	53	2	51	13
2d Battalion, 20th Engineer Regiment ^d	607	17	590	10
204th Military Police Company	113	4	109	0
36th Engineer Regiment (Less Detachments)	116	12	104	4
Detachment of:				
66th Engineer Company (Topographic)	6	1	5	0
1st Armored Signal Battalion	162	5	157	19
122d Signal Company (Radio Intelligence)	26	1	25	4
163d Signal Company (Photographic)	12	2	10	2
239th Signal Company (Operational)	47	1	46	5
829th Signal Service Battalion	90	3	87	10
1st Broadcasting Station Operational Detachment	30	11	19	5
Counterintelligence Group	37	7	30	0
Prisoner Interrogation Group	25	6	19	0
Civil Government Personnel	4	4	0	0
a) Including Battery A (less 4th Platoon), 443d Coast Artillery (AA) Battalion, and 1st Battalion, 36th Engineer Regiment b) Including Battery B (less 1st Platoon), 443d Coast Artillery (AA) Battalion, and 3d Battalion 36th Engineer Regiment c) Including Battery C (2d and 4th Platoons), 443d Coast Artillery (AA) Battalion d) With headquarters detachment and Service Company attached				

Source: George F. Howe, *Northwest Africa: Seizing the Initiative in the West*, United States Army in World War II: The Mediterranean Theater of Operations (Washington, DC: Center of Military History, United States Army, 1993), 122.

The final, and most southern, sub task force was codenamed “Blackstone” and was formed around the 2nd Armored Division commanded by Major General Ernest Harmon.¹⁶² The objective of Blackstone was to seize the port city of Safi and support the

¹⁶² Howe, *Northwest Africa*, 41.

seizure of Casablanca approximately 200 kilometers to the North.¹⁶³ The shore party for Blackstone was tasked to the 2nd Battalion of the 540th Engineer Regiment. Engineer density for this operation was approximately one company for each regimental combat team; however, unlike most other forces landing in North Africa this element had a significant composition of tanks and armored vehicles from the 67th Armored Regiment of the 2nd Armored Division.¹⁶⁴ The support requirements for mechanized formations were significantly greater than for the infantry-based organization that made up the preponderance of forces elsewhere. Greater engineer construction equipment and motor transport was required than was provided to support the tanks during the landing.

¹⁶³ Howe, *Northwest Africa*, 112.

¹⁶⁴ *Ibid.*, 101.

Table 4. Personnel and Vehicles Assigned to Blackstone

Unit	Personnel			Vehicles
	Total	Officers	Enlisted	
Total-----	6,428	327	6,101	779
9th Infantry Division				
1st BLT 47th Infantry ^a	1,422	51	1,371	127
2d BLT, 47th Infantry ^b	1,423	51	1,372	132
Headquarters, 47th Infantry	339	39	300	44
Other 47th Infantry Troops	966	39	927	79
Armored Landing Team				
2d Battalion (reinforced) 67th Armored Regiment	889	39	850	150
Headquarters, Combat Command B, 2d Armored Division	34	10	24	7
Armored Team on Seatrail				
3d Battalion (reinforced), 67th Armored Regiment	255	16	239	189
Other Force "X" Personnel	744	34	710	10
Detachment of:				
Air Force Air Support Party	11	2	9	2
1st Armored Signal Battalion	27	1	26	5
122d Signal Company (Radio Intelligence)	26	1	25	4
142d Signal Company	92	4	88	18
163rd Signal Company (Photographic)	6	1	5	1
239th Signal Company (Operational)	27	1	26	5
66th Engineer Company (Topographic)	5	0	5	0
56th Medical Battalion	71	2	69	0
Headquarters, 2d Armored Division	45	13	32	6
Interpreters	24	16	8	0
Prisoner Interrogation Teams	20	5	15	0
Civil Government Personnel	2	2	0	0
a) Including 4th Platoon, Battery A, 443d Coast Artillery (AA) Battalion b) Including 5th Platoon, Battery A, 443d Coast Artillery (AA) Battalion				

Source: George F. Howe, *Northwest Africa: Seizing the Initiative in the West*, United States Army in World War II: The Mediterranean Theater of Operations (Washington, DC: Center of Military History, United States Army, 1993), 101.

The lack of prewar readiness for landing operations manifested itself almost immediately on D-Day, the 8th of November. In the early morning hours, the naval force under the command of Admiral Hewitt separated into the three sub task forces and sailed to their respective landing areas. H-Hour for the WTF was set at 0400 to take advantage of favorable tidal conditions.¹⁶⁵ Before starting to transfer troops and equipment to the landing craft, inexperienced crews struggled to get their landing craft to the correct

¹⁶⁵ Howe, *Northwest Africa*, 89.

transport ships. High sea state off the coast of French Morocco that night further delayed efforts to debark troops and equipment into landing craft. In the case of sub task force Blackstone, the first wave that departed for the beaches at H-Hour had only three of the five planned boat groups carrying infantry forces and was missing approximately half of the tank landing craft.¹⁶⁶ At Casablanca, with Task Force Brushwood, unloading of transports onto landing craft progressed so slowly that H-Hour was delayed by an hour.¹⁶⁷ Training prior to the war and during rehearsals for Operation Torch were mostly conducted in bays and calm waters; while it is always difficult to transfer troops and equipment at night in heavy swell, the lack of prewar preparation for the task stalled the WTF's mission.

While the confusion at sea attracted a lot of attention in after action reports, leaders across the task force were able to amass enough combat power, shortly after H-Hour in most cases, to start the attack.¹⁶⁸ The initial assaults on the beach, while not the focus of this work, faced little opposition and for the most part were rather successful. Task Force Blackstone landed at Safi only one hour behind schedule and started to rapidly seize objectives.¹⁶⁹ Issues began once the first wave's landing craft tried to pull off the beaches to retrieve a second wave of troops and supplies.

¹⁶⁶ Howe, *Northwest Africa*, 103.

¹⁶⁷ *Ibid.*, 124.

¹⁶⁸ Eisenhower, "Eisenhower Report on Torch."

¹⁶⁹ Howe, *Northwest Africa*, 106.

Inexperienced Navy coxswain for the landing craft ran into trouble after reaching the beach with the first wave of assault troops. Most lacked sufficient training to operate the landing craft and were poorly prepared to remove their craft from the beaches in high swells. A full 57 of the 116 landing craft debarking troops and supplies off the coast of Fedala were stuck or destroyed on the beach during the initial assault.¹⁷⁰ As boats piled up on the beaches throughout the WTF, the arrival of materials and supplies was significantly delayed over the course of D-Day. The failure of the Navy prior to the war to procure landing craft and train personnel to operate them manifested itself during this phase of the operation.

The lack of training for the shore parties and the commanders of the landing forces also began to manifest on D-Day. Engineers of the 36th and 540th were in many cases pulled from their duties by higher commanders to reinforce the beachhead security or perform other infantry tasks. Those not pulled were then severely short-handed and incapable of keeping pace with the incoming landing craft. At beaches north of Rabat intelligence reports of a pending enemy attack caused the commander of 60th Infantry Regiment to pull the engineers from the 1/540th Engineer Battalion inland to reinforce the defensive positions on the evening of the 8th of November. When the French forces did eventually counterattack, the flow of ammunition and supplies had ceased. The artillery ashore supporting the 60th infantry ran low on ammunition and was unable to provide effective counter battery fire against the French artillery batteries taking part in

¹⁷⁰ Howe, *Northwest Africa*, 126.

the counterattack.¹⁷¹ Logistics for task force Goalpost would not commence again until the morning of the 10th, when transports were able to discharge supplies along the recently captured jetty at Port Lyautey, near Rabat.¹⁷²

At Fedala, north of Casablanca, engineers were unable to keep pace with incoming landing craft due to retasking and organizational issues on the beach as well. The Navy resorted to pulling sailors from other duties aboard ships in the area to unload transports at the high water line.¹⁷³ By 1700 on D-Day it was estimated that only 39% of troops, 16% of vehicles, and 1.1% of supplies had been discharged by the assault force.¹⁷⁴ The supplies that were discharged in many cases littered the beaches at the high water mark where the Navy had left them, making them rather useless to the frontline troops fighting inland. The lack of supplies and vehicles affected operations the remainder of D-Day and during the next several days of battle.

By the morning of the 9th of November, the American forces seized the smaller ports of Fedala and Safi. These small ports permitted landing craft to discharge their supplies and equipment in calm waters, which should have improved the throughput of logistics to frontline troops, but the lack of coordination resulted in poor utilization of these facilities. Many of the landing craft and transports in these areas continued to land equipment and supplies at the original beaches. On the 9th of November after surveying

¹⁷¹ Walling, *Bloodstained Sands*, 80.

¹⁷² Howe, *Northwest Africa*, 169.

¹⁷³ *Ibid.*, 135.

¹⁷⁴ *Ibid.*, 136.

operations around Fedala, Patton's diary entry reads, "The beach was a mess and officers were doing nothing. We had tried since the previous day to have the lighters use the harbor, but Emmitt [Captain Robert Emmet, United States Navy] never told them to."¹⁷⁵ He also observed during his circulation that artillery units were without their guns, radio operators had no radios and there was no telephone wire on the beach.¹⁷⁶ The 3rd Infantry Division had to pause their attack southward towards Casablanca on the afternoon of the 9th because of this lack of sustainment. General Anderson specifically noted a lack of radios to coordinate field artillery fire, ammunition, weapons, and transport for heavy weapons which delayed his attack. In one instance a single Jeep supplied an artillery battery during the attack towards Casablanca.¹⁷⁷

While the move into the smaller ports may not have been well planned, it is more likely that the poor training of the shore and beach parties caused them to miss the opportunity to off load supplies in the calm waters. Had the sustainment operations moved into the port and landing craft discharged their cargo in the calm waters of a harbor, supplies would have arrived to shore faster. Furthermore, the roads and infrastructure at the ports would have facilitated faster onward movement of the supplies as opposed to moving them over the beach. The failure to transition landing operations inside the small harbor at Fedala was a major contributing factor to the delayed attack on Casablanca.

¹⁷⁵ Blumenson and Patton, *The Patton Papers*, 108.

¹⁷⁶ Breuer, *Operation Torch*, 220.

¹⁷⁷ Howe, *Northwest Africa*, 139; Matson, "No Tail for the Strategic Dog," 39.

To the south at Safi, Task Force Blackstone's attack was delayed due to a lack of fuel. A heavy combination of tanks and armored vehicles meant the task force was highly dependent upon this critical supply to achieve its objectives. Having limited motor transport in the assault force, tanks had to drive to the port of Safi to refuel directly from a destroyer at the pier once the port was operational.¹⁷⁸ The task force lacked the capability to transport commodities inland and caused delays in Blackstone's operations, preventing them from supporting the attack on Casablanca. The tanks of the 67th Armored Regiment were still 50 miles to the south of Casablanca when Task Force Brushwood began their attack from the North. The limited task organization of one engineer battalion and no other service support units for this landing force severely limited their operational reach during the battle.

The problems did not end once supplies were ashore. The limited number of engineers, untrained in supply dump operations, allowed materials and supplies to pile up at the pier. To rectify the lack of quartermaster and transportation troops available, leaders hired locals to help unload transports and to use civilian trucks to move supplies inland.¹⁷⁹ Without a complete plan to organize or secure the supplies, the inevitable began to happen; some locals made off with large loads of American supplies, both on shore, and in fishing boats leaving the area of operations.¹⁸⁰ While the task force lost some supplies to this theft, most were unavailable simply due to the poor organization of

¹⁷⁸ Breuer, *Operation Torch*, 237.

¹⁷⁹ Ross and Ramanus, *The Quartermaster Corps*, 52.

¹⁸⁰ Howe, *Northwest Africa*, 109.

the supply dumps inland. On the 11th of November Patton made a note in his diary that insufficient provisions were on hand to set up inland dumps resulting in docks and beaches becoming congested.¹⁸¹ Quartermaster units and other technical service troops, with sufficient motor transport, would have significantly improved the situation as demonstrated by the CTF at Oran.

By the afternoon of the 9th of November, the pace of unloading had only slightly improved. Reports from that day showed that 55% of troops, 31% of vehicles and 3.3% of supplies were discharged onto shore.¹⁸² The slow pace of unloading of transports meant transports were waiting at anchor outside the ports, and eventually resulted in the loss of four transport ships to German submarines on the 11th and 12th of November.¹⁸³ Patton's diary on the 12th after the reports of the first set of torpedo attacks reads, "Got up early and went to dock. Nothing was going right...six French trucks ready to help were standing idle because no one took hold." Conditions improved slightly over the next several days after the capture of the deep-water port at Casablanca and the remaining transport ships were unloaded and released for return trips.

On the 19th of November the first administrative convoy arrived at Casablanca. With the arrival of the convoy brought two port battalions with the 6th Port Group to the area of operations. The convoy also had 30 days of supplies and another 32,000 service

¹⁸¹ Howe, *Northwest Africa*, 111.

¹⁸² *Ibid.*, 141.

¹⁸³ Matson, "No Tail for the Strategic Dog," 55.

troops to include desperately needed motor transportation units.¹⁸⁴ The port battalions and other service troops quickly went to work after discharging; however, it would take these forces until the 29th of November to clear the port's docks and organize the supplies into inland dumps.¹⁸⁵

The WTF faced other problems while planning their attack into French Morocco that are beyond the present scope, and judging the decision to leave service support troops behind understates the complexities of the operation. However, it is fair to address the larger preparedness of the United States Army to conduct overseas expeditions during the prewar years. With sufficient training, that supported the development of pertinent doctrine, the plan and outcome may have looked radically different. Meanwhile, the experience of the CTF at Oran provides a strong comparison to address some of the issues facing Patton and the WTF.

Center Task Force Landing

While the landings of the CTF may resemble those of the WTF, they were in fact very different in many key aspects. First and foremost, the assaults of the CTF were combined with a British naval component. The CTF also benefited from the landings being inside the Mediterranean and sheltered from the weather of the mid Atlantic. Finally, the scope of the CTF was about half that of the WTF, with a little less than two divisions of troops landing. These key differences make a direct comparison between the

¹⁸⁴ Ross and Ramanus, *The Quartermaster Corps*, 52.

¹⁸⁵ Jackson, "The Impacts of Movement Control in WWII Mediterranean and Western European Theaters of Operation," 35.

two landings a challenge; however, the difference in the support plans for logistics over-the-shore and establishment of operations at the ports differs enough to enable some conclusions.

The CTF landed at four major beaches around Oran under the command of Major General Terry Allen. The general scheme of maneuver was for two regiments to land to the west of Oran on two separate beaches and then for three other regimental sized elements and a ranger battalion to land on one beach to the east of Oran. Simultaneous to the landings, a battalion sized assault force onboard two British destroyers was tasked to conduct a frontal attack into the Oran harbor to prevent the French from destroying the docks and facilities.¹⁸⁶ The task force contained a mix of armor and infantry much like the force that landed at Safi with the WTF. The armored forces were to conduct the longest movements to protect the flanks of the task force. Additionally, there was an airborne landing to the south of Oran, though it had a negligible impact.

The composition of the support forces for this landing differed from that of the WTF. First and most important was the task organization of the 1st Engineer Amphibian Brigade to the CTF to perform shore party duties. The Brigade consisted of one shore battalion and one boat battalion; however, for this operation the boat battalion was not needed to operate the landing craft, so they converted into additional shore parties.¹⁸⁷ Each regimental combat team was supported by no less than a company of engineers, specially trained and equipped for shore party duties. The density of engineer support was

¹⁸⁶ Howe, *Northwest Africa*, 205.

¹⁸⁷ Heavy, *Down Ramp*, 30.

generally similar to what was seen around Casablanca but the additional training and task organization of these forces under one controlling brigade headquarters made a significant difference.

In addition to the engineer support for the beach operations, the task force brought significantly more service support troops for the assault landings. The quartermaster battalion task organized to the 1st Infantry Division was responsible for establishing supply dumps inland from the beach with the engineers.¹⁸⁸ A gasoline supply company was also assigned to the assault forces to establish fuel dumps for the mechanized forces by D+1.¹⁸⁹ Finally, the Division planned to land a significant number of key logistical leaders on D-Day, including the Task Force G4 COL McNamara, who would identify support locations and coordinate the details with subordinate forces.¹⁹⁰ This robust support structure contributed significantly to the greater success of the CTF.

On the 7th of November, shortly after sunset, the British vessels carrying the American landing force made a turn to the south for Oran. The H-Hour for the CTF was set for 0100 local time. British planners, knowing their landing craft operators were not fully trained to operate on their own, developed a plan for guides to be forward stationed on submarines off the shore of North Africa. Once transports arrived off the coast these guides, who had observed the coastline the day prior from the submarines, transferred to

¹⁸⁸ Ross and Ramanus, *The Quartermaster Corps*, 53.

¹⁸⁹ Kitchen, "The North African Campaign," 82.

¹⁹⁰ Ross and Ramanus, *The Quartermaster Corps*, 52.

the landing craft and assisted in navigation to the beach. This dramatically reduced the number of landing craft lost on the initial assault.¹⁹¹

As the assault waves moved to the beach, engineers from the associated shore regiments were alongside the leading elements. The engineers were tasked with finding beach exits, establishing vehicle staging areas, and preparing supply dump locations inland.¹⁹² Engineer forces with the CTF brought along Somerfield matting to lay down on the beach and created road beds for vehicles departing landing craft.¹⁹³ On the eastern most beach 1st Brigade engineers built pontoon bridges to discharge tanks from converted oilers onto the beach, discharging all the tanks between 0400 and 0759.¹⁹⁴ Armored forces were able to reach objectives approximately 40 kilometers inland on D-Day due to the rapid landing and movement off of the beach.

Being specially organized and trained for the mission of supporting landings, the 1st Engineer Amphibian Brigade also fulfilled roles that were not possible by the separate engineer battalions in the WTF. Most notably the brigade headquarters and commander of 1st Brigade served as the task force's "Principal Military Landing Officer." Brigadier General Henry Wolfe and his staff were responsible for directing landing operations and allowed the combat commanders to focus on fighting their forces inland.¹⁹⁵ The staff

¹⁹¹ Howe, *Northwest Africa*, 193.

¹⁹² Ibid., 195.

¹⁹³ Ibid.

¹⁹⁴ Ibid., 209.

¹⁹⁵ Heavy, *Down Ramp*, 20.

controlled the port operations at Arzew on D+1 until the capture of Oran and the arrival of the port battalions. The Brigade also utilized its own assigned medical capabilities to establish general support aid stations on “Z” beach in the east.¹⁹⁶ Throughout D-Day landing operations were rather successful as compared to the WTF; however, late in the day the sea state worsened and prevented further landings over-the-shore.¹⁹⁷

An initial objective of the forces landing to the east of Oran was the port city of Arzew. While not a deep draft port, the protected waters allowed unloading from transports in heightened sea states. On the morning of D-Day, the 1st Ranger Battalion quickly seized objectives around the port, enabling friendly forces to seize the city and harbor by mid-day.¹⁹⁸ Sustainment troops, to include the G4, landed directly at Arzew and began to prepare the area for logistical support on D-Day. Dump locations were established, and when the sea state rose late in the afternoon on D-Day landing craft shifted to the harbor landing area. Engineers at “Z” beach south of Arzew were ordered by the 1st Engineer Brigade Headquarters to move north and into the harbor to support the landings of materials, freeing the quartermaster Soldiers to organize and distribute supplies.¹⁹⁹ Having both the engineer forces and quartermaster units in the assault force allowed for a continuous flow of materials from the transports to the beachhead line.

¹⁹⁶ Beck et al., *The Corps of Engineers*, 75.

¹⁹⁷ Howe, *Northwest Africa*, 213.

¹⁹⁸ Ibid.

¹⁹⁹ Ross and Ramanus, *The Quartermaster Corps*, 53.

The effectiveness of having robust quartermaster capabilities with the assault forces was demonstrated on D+1. Reports from 26th Infantry Regiment fighting near Les Andalouses to the West of Oran indicated a delay in their attacks on D+1 due to a shortage of ammunition. With a well-prepared beach and quartermaster troops on hand, trucks loaded with ammunition that landed that morning traversed the beach and were immediately dispatched inland to the regiment solving their ammunition shortage.²⁰⁰ This rapid advancement of logistics to sustain combat operations would not have been possible without the coordination of the technical services that landed with the assault forces.

The city and port of Oran were captured by the 1st Infantry Division on the 10th of November. Shortly after the port was secured, the attached port battalions moved to and repaired the port with the Navy's support on the 12th of November.²⁰¹ With the port operational, the over-the-shore logistics for the operation concluded on the 11th of November.²⁰² From the 8th to the 11th, the CTF debarked 75% of vehicles and 30% of the total cargo over the shore.²⁰³ By the 13th of November all remaining cargo from the assault forces transports' had been discharged at the port of Oran allowing the transports to return to their home ports for more supplies.²⁰⁴ While similar in number of personnel and vehicles it was dramatically more cargo brought over the shore than that moved by

²⁰⁰ Howe, *Northwest Africa*, 217.

²⁰¹ Jackson, "The Impacts of Movement Control in WWII Mediterranean and Western European Theaters of Operation," 33.

²⁰² Howe, *Northwest Africa*, 225.

²⁰³ Beck et al., *The Corps of Engineers*, 80.

²⁰⁴ Heavy, *Down Ramp*, 34.

the WTF. It was, however, still significantly short of the original planned throughput described in the planning documents for the CTF.²⁰⁵

Conclusions

Mark Kitchen may have best described the projection of combat power over-the-shore with the WTF when he wrote, “Chaos reigned in the initial supply operations at Casablanca and smaller ports nearby. Much of the difficulty resulted from the inefficiency of the participants, the speed at which they had been assembled and their inability to rehearse the operation.”²⁰⁶ While many of the service support forces needed to effectively project combat power across the shore were left out of the assault convoy, those that did sail had little training, and the rehearsals before the operation were insufficient to expose problems of over-the-shore operations.²⁰⁷

Another important consequence of the inadequate training readiness of the American military to conduct amphibious operations was the loss of valuable landing craft. Due to poor seamanship of the coxswains, the WTF destroyed beyond repair 34% of its landing craft, while the CTF lost 28%. The ETF was worse yet, losing 94% of their craft, but in that case, the beach conditions around Algiers were far more challenging and is a poor comparison to the others.²⁰⁸ The loss of these valuable landing craft affected planning and execution of amphibious operations throughout the remainder of the war.

²⁰⁵ Beck et al., *The Corps of Engineers*, 79.

²⁰⁶ Kitchen, “The North African Campaign,” 49.

²⁰⁷ Breuer, *Operation Torch*, 65.

²⁰⁸ Beck et al., *The Corps of Engineers*, 78.

Planners also assumed port facilities would be captured intact and would be functional. After capture and minor repairs at the end of the landing operations the overall space available to the Allied Force was 68 of the planned 97 berths. This was only two thirds of the planned space available, and it therefore limited throughput for several months.²⁰⁹

While both landing task forces faced unique challenges, the emphasis on technical service support in the CTF played a crucial role in the greater success of the operation when compared to the WTF. The CTF not only had the benefit of specially trained forces for the landing operation, but also the integration of the support staff with these landing troops was essential. The preparation of these forces, organized in time to conduct training and rehearsals, was of upmost importance.

²⁰⁹ Matson, “No Tail for the Strategic Dog,” 51.

CHAPTER 5

CONCLUSION

From the conclusion of the Spanish American War to the landings in North Africa the American military's efforts to improve landing operations were neither an absolute success nor a total failure. Without the work done throughout the first half of the 20th century, the operations of 1942 and specifically North Africa would not have been possible. The limitations of operational reach observed during the North African landings were the byproduct of a complex relationship between doctrine, organization, training, material readiness, and planning. Many works have tried to examine one or two of these areas independently of the others, but this approach does not begin to fully explain the problems seen in 1942. Operation Torch exposed the problems with the military's ability to transition large combat forces from the sea to the land, and more importantly to transition them from unit line numbers loaded on ships, to fighting units organized for combat.

During the remainder of the war, the United States military perfected these operations by addressing the problems identified during Operation Torch in a more holistic manner. After Operation Torch, the Army and the Navy with strategic plans in place, updated their doctrine, obtained necessary equipment, tailored special organizations and trained them to prevail. Had this comprehensive effort been done during the interwar years or during the mobilization of the force, the lessons of Operation Torch could have been resounding successes as opposed to limited success observed.

A unique requirement for the United States Army, due to geography, is to project combat power across vast oceans to areas of conflict. We can draw simple conclusions

from Operation Torch about the need for amphibious capabilities and more specifically the technical and service troops to be provided for such operations. The more important lesson for military professionals to take away is the interrelationship between doctrine, material, training, organization, and war planning. Leaders today need to understand that every training event is a chance to question and improve doctrine, to test new equipment and organizations, and apply lessons learned to future planning. Accepting status quo or conducting training with no purpose to enhance the other aspects addressed here is a wasted opportunity.

The landing operations during Operation Torch were only the first phase of what was a larger and more complex campaign. The ETF's larger objective was attacking East from Algiers towards the port City of Tunis. Had the British forces been successful in reaching the city before the German Army, the enemy's vital lifeline back to Europe would have been severed resulting in their defeat. The problem was as General Eisenhower notes in his after-action report, "the 78th Division was not as yet strong enough to press the advance. Hence they were ordered to delay temporarily any move forward until the build-up of forces and supplies was sufficient to give the assault on Tunis a reasonable chance of success."²¹⁰ The advancement towards Tunis by the British 78th division halted on the 26th of December, just 16 miles from Tunis.²¹¹ The opportunity to finish the attack did not present itself again during December as the

²¹⁰ Eisenhower, "Eisenhower Report on Torch," 20.

²¹¹ Matson, "No Tail for the Strategic Dog," 7.

German army rapidly retrograded to positions around the city and counterattacked.²¹² The advancement on 26th of December was the closest that the Allies came to completing the campaign until May 1943, when Tunis was finally captured.²¹³

It would be a great stretch to imply that the lack of preparations for over-the-shore operations was the cause of the Allied failure to secure Tunis before the German Army could in December 1942. The Allied plan for North Africa was based upon the rapid seizure of port cities to build and project both land and air combat power.²¹⁴ Works by Mark Kitchen, Junias Jackson, Richard Matson and others have explored the greater implications of a failure to thoroughly plan and consider logistics in the broader concept of the campaign.²¹⁵ What can be explored are the extensive after action reports that recommend changes, and how the Army and the Navy refined their plans for amphibious operations for the remainder of the war.

In his after-action report, General Eisenhower noted the failure of the direct assaults on the ports of Algiers and Oran.²¹⁶ In both cases these operations attempted to rapidly seize ports to allow the transition from over-the-shore to port operations, which would have allowed far greater throughput of sustainment. Both direct assaults used two

²¹² Howe, *Northwest Africa*, 374.

²¹³ Ibid., 649.

²¹⁴ Joint U.S. Chiefs of Staff, J.C.S. 127.

²¹⁵ Kitchen, “The North African Campaign”; Jackson, “The Impacts of Movement Control in WWII Mediterranean and Western European Theaters of Operation”; Matson, “No Tail for the Strategic Dog.”

²¹⁶ Eisenhower, “Eisenhower Report on Torch,” 15.

old destroyers and approximately a battalion of infantry riding on the warships. In both cases the assaults failed, resulting in high casualties and the eventual loss of all vessels.²¹⁷ The capability of the Allied force to project sustainment over the shore was insufficient to accomplish the operational objectives of Operation Torch which made these direct assaults necessary. Had the Allies been prepared at the beginning of the war to project combat power across the shore, these operations would have been unnecessary risks, and thus might not have happened.

The need for improvements in organization and training of beach and shore parties was prominent in both the Army's and the Navy's after-action reports. The Navy's Atlantic Fleet report highlighted the need for beach and shore parties to be "highly trained personnel under one [Army] commander."²¹⁸ AGF observers with the WTF recommended that "training in the actual handling of supplies across the beaches, training of shore parties and beach parties in conjunction with troops and their supplies" should be conducted in as near to real conditions as possible.²¹⁹ The same report recommended retaining the practice established at Oran with the 1st Engineer Amphibian Brigade, where the "commanding officer of shore party troops should be a member of the staff" of the task force commander. This organization assured that personnel and equipment were landed in the correct order to support the broader objectives of the

²¹⁷ Breuer, *Operation Torch*, 141, 170.

²¹⁸ Amphibious Force, United States Atlantic Fleet, "TORCH Operation: Comments and Recommendations," (Naval Operating Base, Norfolk, VA, 22 December 1942), 12.

²¹⁹ Army Ground Forces, "Summary of Lessons Derived from Amphibious Operations, November 8-11, 1942, at Casablanca Oran," (February 1943), 28.

operation.²²⁰ During mobilization for war, both the Army and the Navy recognized the deficiency in preparedness to conduct amphibious operations. Their actions to establish training centers and form new organizations, however, were too late to positively affect the operations in North Africa, with the exception of Oran. After the publication of the after-action reports, leaders in both services used the recommendations and conducted further training and reorganization during the winter and spring of 1943 to prepare for operations in Sicily.

The success of the organization and training of the 1st Engineer Amphibian Brigade was reinforced during Operation Husky in July 1943. The Brigade's role during this subsequent operation was expanded, attaching both the 540th and 36th Engineer Regiments from the WTF along with other service troops. The final strength of the brigade for Operation Huskey totaled almost 30,000 Soldiers and the brigade was responsible for all logistics over the shore.²²¹ The joint force embraced the lesson that specially trained and organized formations, with the responsibility to control over-the-shore operations, were crucial to greater success during Operation Huskey.

The allies reinforced this growing success of the Amphibian Brigades further during Operation Overlord in June 1944. Army planners understood the importance of a headquarters on the shore that not only served as a shore party, but also as an initial communications zone headquarters. On Omaha beach the 5th and 6th Engineer Special Brigades served in this role while the 1st Engineer Special Brigade performed the duties

²²⁰ Army Ground Forces, "Summary of Lessons Derived from Amphibious Operations, November 8-11, 1942, at Casablanca Oran," 19.

²²¹ Heavy, *Down Ramp*, 40.

on Utah Beach.²²² Task organized to the special brigades were three engineer battalions and service support troops to prepare the beach and handle the large quantities of material needed. They began training six months prior to the invasion in December 1943 and were equipped with special equipment to include increased numbers of D7 bulldozers, cranes, motorized road graders, and tractors.²²³ The lessons from North Africa fully matured by the landings at Normandy with specialized material, organizations, and training to support the large-scale landings.

From the interwar period through the mobilization, doctrine development and professional education of leaders was crucial to Operation Torch being possible. Comments about the Army's need for greater amphibious doctrine are found throughout the ETFs' after-action reports. Whether the officers preparing the report were unaware of FM 31-1 prepared by the Army in 1941 or found it inadequate is not clear, but their comments led to the conclusion that if they did know of its existence, they found it lacking.²²⁴ In 1944, the Army updated the manual with many of the lessons learned captured. The Army acknowledged their role in the shore party and no longer expected the Navy to unload landing craft at the beach. The same section specified quartermaster, transportation, and ordnance functions as part of the shore party, and the need to allocate

²²² Heavy, *Down Ramp*, 71.

²²³ Ibid., 75.

²²⁴ Eastern Assault Force, United States Army, "Lessons From Operation 'Torch'," (December 1942), 2.

troops to establish these functions early during the operation.²²⁵ No longer was there an entire chapter on unloading pack animals. The chapter was replaced with procedures for unloading supplies and methods for moving them across the beach. Several pages were dedicated to the organization of the beach, establishment of supply points, and procedures for moving equipment across the sand.²²⁶ These lessons, however, did not need to be learned under fire. Had the joint force realized the greater need for over-the-shore logistical capabilities after the 1930s joint landing exercises, the doctrine of 1944 could have been the doctrine of 1941.

The shortage of landing craft persisted throughout the rest of the war due to the poor material readiness in 1941. The sheer scope of the war required more landing craft, especially the Landing Ship Tank (LST), than could be produced in a timely manner. The shortage of larger landing craft affected planning as late as the summer of 1944 when the simultaneous execution of Operations Overlord and Dragoon were unfeasible.²²⁷ The training during the interwar era routinely highlighted the need for larger specialty craft that could land vehicles and cargo on the beach but with the limited resources before World War II, these recommendations were never acted upon. During the mobilization for the war the competition for dockyards with destroyers and similar sized ships did not allow the United States to keep pace with demands for large landing craft.

²²⁵ United States Army, Field Manual 31-5, *Landing Operations on Hostile Shores* (Washington, DC: United States Government Printing Office, 1944), 16.

²²⁶ *Ibid.*, 138.

²²⁷ Matloff and Snell, *Strategic Planning for Coalition Warfare*, 264.

This work in no way fully explores the implications of the amphibious brigades or other organizations developed during World War II that made the conduct of the war possible. Future work on this subject has many opportunities throughout the Pacific both with the Marine Corps and the Army in the Southwest. Further examination of the plans for other Mediterranean operations and then onto Overlord and Dragoon would complete the European theater of war. Several works examine limited threads throughout the war but the combination of how training, doctrine, organization, materiel, and planning come together to project combat power over the shore has room left for further examination.

The conduct of Operation Torch and the immediate corrective actions taken before Operation Husky nine months later show the relationship between doctrine, training, organization, materials, and planning. Operation Torch served as the crucible event for the United States military that should have happened before the war. Before Operation Huskey, leaders captured lessons learned, organized forces for the future missions, and then trained them with proper equipment.²²⁸ Had the military conducted these same actions after each joint landing exercise of the 1920s and 1930s the United States would have been in a far better position at the outbreak of the war.

²²⁸ Heavy, *Down Ramp*, 38.

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