STEVEN J. ZALOGA

ATLAS OF THE
EUROPEAN
CAMPAIGN
1944–45

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A NOTE ON MILITARY UNIT NAMES

Traditional conventions have been used in this work when referring to military units. In the case of US units, 2/39th Infantry refers to the 2nd Battalion, 39th Infantry Regiment. The US Army traditionally uses Arabic numerals for divisions and smaller independent formations (9th Division, 743rd Tank Battalion), Roman numerals for corps (VII Corps), and spelled numbers for field armies (First US Army).

In the case of German units, field armies were designated in the fashion 7.Armee, but sometimes abbreviated as AOK.7; the former style is used in this work. German corps were designated with Roman numerals, as in LXXXIV.Armee-Korps, but the alternate version 84.AK was also used. Arabic numerals were used for divisions (e.g. 352.Infanterie-Division) regiments (Grenadier-Regiment.919), separate battalions (i.e. non-regimental) and *Abteilungen* (e.g. Panzer-Abteilung.100), and companies (2./Grenadier-Regiment.919 refers to the 2nd Company within the regiment); Roman numerals were assigned to regimental battalions (II./Grenadier-Regiment.919 indicates the 2nd Battalion of Grenadier Regiment.919).

British practices were less formal, for example, both 3rd Division and 3 Division, 30 Corps and XXX Corps, 8th Army and Eighth Army were used. The former styles have been used in this work.

A NOTE ON OPERATIONAL TIMING

The terms D-Day and H-Hour are used throughout this work to indicate the day (D) and hour (H) at which a combat operation was initiated.

D+1 indicates one day after the day the operation begins.

D-1 indicates one day before the first day of the operation.

H+5 indicates H-Hour plus 5 minutes, i.e. if H-Hour is 0630hrs, then H+5 would be 0635hrs.

H-5 indicates H-Hour minus 5 minutes, i.e. if H-Hour is 0630hrs, then H-5 would be 0625hrs.

LEGEND FOR MAPS

UNIT SYMBOLS
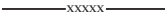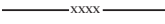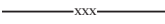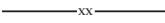
Symbol	Name	Symbol	Name
⊠	Infantry	▲	Mountain
⬭	Armored unit	•	Artillery
⊠	Armored infantry	⊙	Armored artillery
⊠	Airborne infantry	◈	Coastal artillery
⊘	Armored cavalry	⊖	Assault gun
╱	Reconnaissance	△	Tank destroyer
⊠	Glider infantry/air landing		

UNIT SIZES

XXXXX	Army Group
XXXX	Army
XXX	Corps
XX	Division
X	Brigade
III	Regiment
II	battalion
I	Company

PHYSICAL FEATURES

——xxxxx——	Army group boundary
——xxxx——	Army boundary
——xxx——	Corps boundary
——xx——	Division boundary
————	Road
··············	Railroad
————	River
··············	Canal
▦	Bushes/woodland
▦	Marsh

CONTENTS

CHAPTER 3: THE BATTLES ALONG THE GERMAN FRONTIER, SEPTEMBER–DECEMBER 1944 137

CHAPTER 4: THE ARDENNES CAMPAIGN, DECEMBER 1944 TO JANUARY 1945 201

CHAPTER 5: BATTLES FOR THE ROER AND RHINE, FEBRUARY–MARCH 1945 231

CHAPTER 6: ENDGAME AGAINST THE THIRD REICH, APRIL–MAY 1945   245

FURTHER READING   278

GLOSSARY AND ABBREVIATIONS

Abteilung: German unit between battalion and regiment in size

AFV: Armored fighting vehicle

AOK: Armee Oberkommando (Army High Command); German field army headquarters

AVRE: Armoured Vehicle Royal Engineers

Bataillon: Germany formation comprising several companies

Battalion: Allied formation of several companies

Combat Command: A brigade-sized, combined-arms formation in a US armored division

Combat Command R: Headquarters for reserve units in a US armored division

COSSAC: Chief of Staff to the Supreme Allied Commander

DD: Duplex Drive

Division Blindée: French Armored Division

Division d'Infanterie Algérienne: French colonial infantry division raised in Algeria

Ersatzheer: Replacement Army; German organization for raising and rebuilding army units inside Germany

ETO: European Theater of Operations

Fallschirmjäger-Regiment: German paratrooper regiment

Festung: Fortress; a selected town or city acting as a German stronghold

FFI: French Forces of the Interior

FHW: Fremde Heere West (Foreign Armies West)

Flak: Flugabwehrkanone: German antiaircraft gun

G-2: US Army intelligence at divisional or higher level

GMC: Gun Motor Carriage; typically, a self-propelled tank destroyer

GPF: Grande Puissance (High Power) Filloux gun

Heeresgruppe: German army group consisting of several field armies

Heeres-Küsten-Artillerie-Abteilung: Army Coastal Artillery Battalion

Heeres-Küsten-Artillerie-Regiment: Army Coastal Artillery Regiment

Hochleitstand: German fire-control tower

Infanterie-Division: German infantry division

Kampfgruppe: German battle group; an extemporized formation of a few companies to a regiment or more in size

Kompanie: German Army company

Korps: German for corps, a formation consisting of several divisions and supporting units

KVA: Küsten Verteidigung Abschnitt (Coastal Defense Sector)

KVU: Küsten Verteidigung Untergruppe (Subdivisional Coastal Defense Group)

LCA: Landing Craft, Assault

LCI: Landing Craft, Infantry

LCM: Landing Craft, Mechanized

LCT(R): Landing Craft Tank (Rocket)

LCT: Landing Craft, Tank

LCVP: Landing Craft, Vehicle and Personnel

leichte Marine-Artillerie-Abteilung: German Light Naval Artillery Battalion

LST: Landing Ship, Tank

LVT: Landing Vehicle, Tracked; an amphibious tractor, also called the Buffalo by the British

Marine-Artillerie-Abteilung: German Naval Artillery Battalion

Marine-Küsten-Batterie: German Naval Coastal Battery

MGK: Marinegruppenkommando (Naval Group Command)

MTO: Mediterranean Theater of Operations

OB Nordwest: Oberbefehlshaber Nordwest (Northwest High Command)

OB West: Oberbefehlshaber West (High Command West)

OKH: Oberkommando des Heeres (Army High Command), primarily responsible for the Eastern Front

OKW: Oberkommando der Wehrmacht (Armed Forces High Command), in charge of the Western Front

Osttruppen: Former Red Army prisoners of war recruited into the Wehrmacht

PaK: Panzerabwehr Kanone: antitank gun

Panzer-Ersatz-und-Ausbildungs-Abteilung: Tank Replacement and Training Battalion

Panzergrenadier: German mechanized infantry

Panzerjäger: Tank destroyer

Panzerstellung: Turret of an obsolete tank mounted on a small concrete bunker

Pionier: German engineer unit

PzKpfw: Panzerkampfwagen: tank

RAD: Reichsarbeitsdienst (Reich Labor Service)

RCT: Regimental Combat Team

RE: Royal Engineers

Reichs Verteidigungs Kommissar: Reich Defense Commissar; Nazi party official in charge of homeland defense

SAS: Special Air Service

schwere Panzer-Abteilung: Heavy Tank Battalion, usually a Tiger battalion

SHAEF: Supreme Headquarters Allied Expeditionary Force; Eisenhower's headquarters

StuG: Sturmgeschütz: a German assault gun, typically the StuG III on a PzKpfw III chassis mounting a 75mm gun

Stützpunkt: Strongpoint (a company-sized defense position)

Tactical Air Command: USAAF unit providing tactical air support to Allied ground forces

USAAF: US Army Air Forces

Volksgrenadier: People's Grenadier; typically a reduced-scale 1944 army division for defensive missions

Volkssturm: National militia established in Germany in the closing months of World War II

WBN: Wehrmacht Befehlshaber Niederlands (Armed Forces Command Netherlands)

Wehrkreis: German regional military district for raising and training troops

WN: Widerstandsnest (Defense Nest); a platoon-sized defensive position

INTRODUCTION

The *Atlas of the European Campaign* chronicles the campaign in western Europe from the amphibious landings in Normandy on DDay, June 6, 1944, through the German capitulation on May 8–9, 1945. Different names have been applied to this campaign by the various armies. The US Army referred to it as the European Theater of Operations (ETO) while the British army usually referred to it as the campaign in Northwestern Europe (NWE) since it was not heavily involved in the campaign in southern France. The Germans have generally referred to this theater simply as "the West".

The maps are based on the Osprey Campaign series of books, which are primarily focused on land campaigns. As a result, neither air nor naval campaigns are depicted here, except to the extent of their connection with the land campaigns.

This atlas is a companion volume to the previous Osprey *Atlas of Eastern Front 1941–45* that covers the conflict between Germany and its allies versus the Soviet Union. One of the obvious differences between the two is the duration of coverage – about four years in the case of the Eastern Front, compared to less than year in the case of this volume on the European Theater. There was a substantial chronological interlude in the campaigns in western Europe between the defeat of France in the summer of 1940 and the Allied amphibious landings in Normandy in the summer of 1944. War between Germany and the western Allies continued during this interlude, but in three different theaters: the naval war in the Atlantic; the air war over Europe; and the war in the Mediterranean Theater in 1939–44.

This long interlude was the result both of British strategic culture and the configuration of its armed forces. As the world's premier naval power for more than a century, British strategy attempted to leverage its naval advantages when it was obliged to conduct land campaigns. A "Peripheral Strategy" emerged, which depended on naval power to shield Britain, while relying on a small British army fighting alongside Allied armies on the European continent when necessary.

In the wake of the defeat of the British Expeditionary Force in France in the summer of 1940 and its subsequent evacuation back to Britain, the United Kingdom did not have the land power to return to the European continent for the foreseeable future. Its army was a fraction the size of Germany's, and its focus in the second half of 1940 and early 1941 was the defense of Great Britain against a potential German amphibious invasion. The British army was active in other theaters, notably North Africa and Greece in 1940–41, but these were relatively small campaigns against small Axis forces.

The German invasion of its erstwhile ally, the Soviet Union, in June 1941 completely altered the strategic picture. Britain no longer confronted Germany alone, but now had an ally with a substantial land army. This alliance conformed to Britain's preference for a "Peripheral Strategy" since the Soviet Union's substantial ground forces counterbalanced Britain's strengths on the sea and in the air. A major British concern over the next three years was to placate the Soviet Union. Stalin insisted on a "Second Front" in Europe to relieve the German military pressure on the USSR. Since Britain did not have an army sufficient for a campaign in Europe, Churchill attempted to placate Stalin by campaigns in other theaters, short of a direct confrontation on the European mainland.

The second critical turning point of 1941 was Germany's foolhardy declaration of war on the United States in the wake of the Japanese attack on Pearl Harbor in December 1941. This brought the United States into the conflict on Britain's side. Although the United States had substantial manpower, financial, and industrial resources, it would take some time to mobilize and militarize this power. Furthermore, Britain now had to contend with two other strategic problems – convincing the United States to give the European Theater priority over the Pacific Theater, and synchronizing the strategic timetables of Britain and the United States in regards to operational planning for future campaigns. The strategic issue of the European/Pacific balance is outside the scope of this book; suffice it to say that Churchill had little trouble in convincing Roosevelt to emphasize Europe over the Pacific.

As will be detailed in the map narratives in the next few pages, the synchronization of British and American operational planning remained contentious through 1942–43. The American strategic outlook was fundamentally different from the British, preferring the start of a European campaign as soon as possible and disdaining British preferences for campaigns in peripheral areas such as North Africa and the Balkans. British military and political leaders tried to cool American impatience, warning of the pitfalls of a hasty intervention on the European mainland. In 1942 and early 1943, the British were able to convince the Americans of the value of chipping away at Axis power, starting with Germany's most significant ally, fascist Italy. By the autumn of 1943, these arguments had run their course once Italy withdrew from the war. The United States made clear its intentions to refrain from any further commitments in Italy and the Mediterranean Theater, and Britain was obliged finally to start the countdown clock to invasion of France in the late spring or early summer of 1944.

Germany's defense of Festung Europe was based on the Atlantic Wall. This is one of the massive 406mm guns of the naval coastal battery MAA.244 "Lindemann" near Sangatte after its capture by Canadian troops in 1944. (Library and Archives Canada, Donald Grant, PA 133140)

MAP 1: THE EUROPEAN THEATER OF OPERATIONS – JUNE 1944 TO MAY 1945

Operation *Overlord*, the Allied amphibious landings in Lower Normandy (Basse-Normandie) on June 6, 1944, started the campaign. It took nearly six weeks for the Allies to fight their way out of the beachhead, including a campaign to capture the port of Cherbourg, the First US Army campaign to fight free of the *bocage* (hedgerow) area, and the British/Canadian struggle to overcome German defenses in the Caen sector. In late July 1944, the First US Army launched Operation *Cobra*, which started to break out from Normandy. Hitler ordered a Panzer counterattack, Operation *Lüttich* (*Liège*), which quickly failed and which weakened the German forces around Caen. As a result, the Allied forces trapped a large portion of the remaining German forces in the Falaise Pocket. The destruction of much of the German Army in Normandy led to a race beyond the Seine River into Belgium and the Netherlands and to the German frontier. General George S. Patton's Third US Army raced toward Paris, and, after a popular insurrection, Paris was liberated by the Allied armies on August 24, 1944. The defeat of the German Army in France was completed with Operation *Dragoon*, a second amphibious landing on the French Mediterranean coast that sent the German Army in southern and central France into headlong retreat.

For a moment, it appeared that the German Army would collapse in much the same fashion as the Kaiser's army in November 1918. To exploit this situation, the Allies launched Operation *Market-Garden*, a combined ground–airborne operation intended to capture Rhine bridges to facilitate a race into Germany. In the event, the German Army rallied and restored the situation in September 1944, dubbed the "Miracle of the Westwall." Bitter fighting broke out along the German frontier, including the bloody battle for the Hürtgen Forest. The Allies had raced across France and the Low Countries so quickly that they were beyond the reach of their logistics train. Furthermore, they had overlooked the need to clear the access to the port of Antwerp, the most suitable port near the battlefield. As a result, Canadian and British forces spent much of the early autumn clearing the Scheldt Estuary to open Antwerp for traffic.

With German military resources on the verge of exhaustion, Hitler planned a final desperate gamble to redeem the situation in the West. Recalling the victory over France in 1940 that had begun with a surprise Panzer attack through the forested Ardennes in Belgium, Hitler gambled on a similar venture in December 1944 aimed at splitting the American and British armies by a surprise Panzer offensive toward Antwerp. Although the Ardennes offensive made some headway in its first week, by Christmas 1944, it had been halted. It took another three weeks of fighting to eliminate the "Bulge" that had been created by the German attack. A second series of smaller offensives were launched in Alsace, starting with Operation *Nordwind* on New Year's Day.

Defeat in the Battle of the Bulge left Germany with few military options. However, it took another four months of fighting to force the German surrender. In February and March 1945, the Allied armies fought a series of battles to push to the Rhine River, in the process destroying much of the remainder of the German Army in the West. The Rhine was the last substantial geographic barrier to the Allied advance into Germany, and, during the third week of March 1945, the Allies conducted a series of operations to cross the river in force. In the north, General Bernard Montgomery's 21st Army Group staged Operation *Plunder*, a river-crossing operation with an associated airborne assault, Operation *Varsity*. In the center, the First US Army had captured the Ludendorff Bridge at Remagen early in March, but waited until late March to execute Operation *Voyage*, a breakout operation south of the Ruhr industrial zone. Farther south, Patton's Third US Army was the first across the Rhine with a hasty jump over the river near Oppenheim on March 22–23, 1945.

The weakness of the German Army in early April 1945 allowed Lieutenant-General Omar Bradley's 12th Army Group to surround the main German force, Heeresgruppe (Army Group) B in the Ruhr with the Ninth US Army converging from the north and the First US Army converging from the south. Hitler refused permission for a withdrawal and, as a result, some 370,000 German troops were trapped, leading to a surrender larger than at Stalingrad or in Tunisia. The reduction of the Ruhr pocket marked the end of large-scale operations by the German Army in the West. In the north, Montgomery's 21st Army Group continued the liberation of the Netherlands and pushed on toward Denmark. In the center, Bradley's 12th Army Group pushed to the Elbe River to link up with the advancing Red Army. In the south, Patton's Third US Army and Lieutenant-General Jacob Devers' 6th Army Group pushed into Bavaria, Austria, and the border areas of Czechoslovakia. Germany surrendered on May 8, 1945, ending the conflict.

North Sea

Kiel

Breakout from Rhine bridgeheads,
March–April 1945

Closing on the Rhine,
February–March 1945

Hamburg

Wismar

Stettin

Oder

Westwall battles,
October–November 1944

NETHERLANDS

Bremen

Wittenburg

Warta

GREAT BRITAIN

Amsterdam

Weser

Berlin

Posen

Spree

Clearing the Scheldt,
October–November 1944

The Hague

Arnhem

GERMANY

Advance to the Elbe,
April–May 1945

London

Munster

Elbe

Torgau

Oder

Duisburg

Kassel

Leipzig

Dresden

Antwerp

Cologne

Chemnitz

Breslau

Race to the Seine,
August–September 1944

Brussels

Rhine

Aachen

Liège

Remagen

Frankfurt

Prague

Operation *Overlord*,
June 1944

XXXXX
21
Montgomery

BELGIUM

Main

Pilsen

CZECHOSLOVAKIA

Normandy fighting,
July 1944

Cherbourg

LUX.

Luxembourg

Moselle

Mainz

Nurnberg

Regensburg

Brunn

Le Havre

Reims

Seine

Metz

Danube

Operation *Cobra* breakout,
August 1944

Caen

XXXXX

Paris

Marne

Meuse

Stuttgart

Linz

Vienna

Brest

XXXXX
12
Bradley

Troyes

Strasbourg

German Ardennes offensive,
December 1944–January 1945

Munich

Salzburg

Clearing the national redoubt,
April 1945

**ATLANTIC
OCEAN**

Loire

XXXXX

Dijon

Over the Vosges,
November 1944

XXXXX
6
Devers

Berne

Zurich

Innsbruck

AUSTRIA

Graz

La Rochelle

FRANCE

Lyon

Geneva

SWITZERLAND

ITALY

Trieste

Zagreb

Royan

Milan

Verona

Venice

YUGOSLAVIA

Bordeaux

Turin

Po

Ferrara

Genoa

Ravenna

Garonne

Bologna

Rhône

La Spezia

Ligurian Sea

Perugia

*Adriatic
Sea*

Split

Allied monthly advance

	June 6–7, 1944
	June 8–July 7, 1944
	July 8–August 7, 1944
	August 8–September 7, 1944
	September 8–October 7, 1944
	October 8–November 7, 1944
	November 8–December 7, 1944
	February 8–March 7, 1945
	March 8–April 7, 1945
	April 8–May 8, 1945

Marseilles

Toulon

Operation *Dragoon*,
August–September 1944

CORSICA

0   200 miles

0   200km

SPAIN

Heeresgruppe G retreat,
September 1944

Rome

13

MAP 2: THE STRATEGIC DEBATE – 1942–44

Prime Minister Winston Churchill and President Franklin Roosevelt met at the Arcadia Conference in Washington, DC in December 1941 where Churchill outlined the basic British strategic concept. The Axis countries would be strangled by a tight naval blockade; Germany would be devastated by a heavy bomber offensive; a propaganda war would be waged against German morale and to bolster the morale of the occupied countries; raids would be conducted on the periphery of Europe from Norway to Greece; and a final assault would be conducted on Fortress Europe once Germany was sufficiently weakened. This reflected the traditional British strategic approach, variously called a peripheral strategy or indirect strategy. This was reflected in the British order of battle, which placed greater emphasis on the Royal Navy and Royal Air Force than on the Army.

The US strategic concept was developed in late 1941 and early 1942 under the Chief of the War Plans Division, Major-General Dwight Eisenhower, and presented to Roosevelt on March 27, 1942. As an essential first step, American forces would be built up in Great Britain, codenamed *Bolero*; this would take a year or more. The ensuing military campaign would consist of aerial bombardment and coastal raids on occupied Europe. An emergency campaign codenamed *Sledgehammer* would establish a beachhead on the Cotentin Peninsula, including Cherbourg, sometime in 1942 in the event of a major German defeat on the Eastern Front or a weakening of German forces in France. The main amphibious assault, codenamed *Roundup*, would take place somewhere between Le Havre and Boulogne in 1943. Although not explicitly stated, US strategic cooperation with both Britain and France was conditional on the expectation that US operations would remain indifferent to their imperial concerns, notably in the Mediterranean.

British planners felt *Sledgehammer* was premature and dangerous. But there was a consensus that something had to be done to mollify Moscow since the Red Army was bearing the brunt of the land campaign. In July 1942, the Allies agreed to a compromise, Operation *Torch*. This consisted of amphibious landings in French North Africa to support the British advance across Libya. The American strategic drift into the Mediterranean Theater continued into 1943. The American Joint Chiefs of Staff under General George C. Marshall continued to press for the cross-Channel *Roundup* attack into northern France in 1943. The British chiefs under Field Marshal Sir Alan Brooke contended that such an operation was premature until Allied forces were stronger. He forcefully argued that continued Allied operations in the Mediterranean were more feasible, would maintain the momentum in the region, and would force the Wehrmacht to divert additional divisions to this theater, thereby weakening defenses in northern France. Both sides agreed that some large operation would be needed to placate the Soviets. In the end, Marshall agreed to continued operations in the Mediterranean in the summer of 1943, provided that they did not require the diversion of troops earmarked for the future cross-Channel operation. Since the US side would not commit to further operations in Italy after the summer 1943 landings, Sicily was the prudent choice, and a decision for Operation *Husky* was reached on January 18, 1943 at the Casablanca Conference.

The first step in preparing for *Roundup* was the creation of the COSSAC (Chief of Staff to the Supreme Allied Commander) planning group under Lieutenant-General Frederick Morgan in March 1943. The initial focus of COSSAC was to consider possible raids along the European coast to keep the Germans guessing about the direction of an Allied invasion. A secondary mission was to plan a follow-on to *Sledgehammer*, codenamed *Rankin*, to consider a rapid operation somewhere in Europe in the event of a sudden German collapse. In June and July 1943, COSSAC provided a basic outline for future operations consisting of an initial three-division landing in Normandy, and a simultaneous invasion of southern France. This was approved during the Quadrant Conference of Roosevelt and Churchill in Quebec in August 1943. Churchill opined that the initial landings should be larger and include landings on the Cotentin coast as well. The new plan was codenamed *Overlord* with the cross-Channel portion of the plan dubbed *Neptune* and the invasion of southern France codenamed *Anvil*.

Through the course of late 1943 and into 1944, there continued to be changes. The size and scope of the *Neptune* landings in Normandy gradually became larger, forcing the postponement of the *Anvil* landing in southern France since there was insufficient amphibious lift to conduct both simultaneously. The codename for *Anvil* was changed to *Dragoon* when it was rescheduled. *Neptune* and *Dragoon* marked the gradual shift away from the traditional British peripheral strategy and toward American priorities of a direct assault on the center of German power in France. This was due in no small measure to the growing preponderance of American military power within the coalition.

MAP 3: PRECURSORS TO *OVERLORD* – 1942–44

The success of the D-Day invasion, Operation *Overlord*, was due in no small measure to previous Allied amphibious landing operations, primarily in the Mediterranean theater. These operations tested out a host of new technologies such as landing craft, tank landing ships, amphibious trucks, amphibious tractors, assault transports, and many other essential devices. In addition, it built up experience in tactics by addressing questions about night versus daytime landings, the value of associated airborne operations, the level of necessary naval gunfire support, coordination of air support, and a host of other issues.

Operation *Jubilee*, the Dieppe raid on August 19, 1942 on the French coast, was the first large-scale landing against a contested shore. It was not intended to create a permanent lodgment, and, aside from its value in testing amphibious tactics and equipment, its ultimate operational value remains controversial. The more cynical evaluation of its motives is that Churchill desired such a costly operation to impress upon the Americans how unprepared the Allies were to conduct an amphibious landing in France in 1942, which the United States had been pressing for. Regardless of the real motives of the Dieppe raid, it was instrumental in exposing shortcomings in Allied amphibious landing equipment and tactics. It also raised the question of whether it was prudent to conduct a landing directly against a fortified port.

The first amphibious operation after Dieppe was Operation *Torch* in November 1942, which led to the seizure of French North Africa and the introduction of the US Army into the North African campaign. This operation against the halfhearted Vichy French opponent was far more successful than Dieppe. However, it did underscore lingering technical issues, such as the lack of sufficient landing craft, and the need for larger landing ships such as the forthcoming LST (Landing Ship, Tank) to deliver heavier equipment ashore such as tanks.

Operation *Husky* in July 1943 was the pioneer amphibious operation and was by far the largest and most complicated to date. Although Italian coastal defenses were not especially effective, the operation was more technically challenging than *Torch*. *Husky* saw the debut of several new technologies including newer types of landing craft, LSTs, and DUKW amphibious trucks. More importantly, it saw several tactical innovations including associated parachute and glider landings, and the first real test of Allied naval gunfire support. The problems with the airborne operations on Sicily were instrumental in planning the airborne operations for Normandy. By far the most important tactical lesson from Operation *Husky* was that it was possible to conduct an amphibious operation away from a major port. Until *Husky*, planners had generally preferred landings at ports on the assumption that the docks would be needed for logistical purposes after the landing. *Husky* proved that the growing Allied technical capability in amphibious operations made it possible to land away from heavily defended ports and still provide adequate logistical support until a port could be captured. This meant that a Normandy landing did not have to be directed against a heavily defended port such as Cherbourg, Calais, or Le Havre.

The next two operations in early September, *Baytown* and *Slapstick*, exploited the success of *Husky* to put the British Eighth Army on the Italian mainland, using the same assets and tactics as *Husky*. Operation *Avalanche* at Salerno later in the month showed the value of amphibious landings as a means of operational mobility. Although the Salerno landing ultimately succeeded, there were numerous tactical shortcomings that needed to be addressed. From the German perspective, the lesson that was not learned was that the preferred tactical response to an amphibious landing, a Panzer counterattack against the beachhead, was not a reliable solution in the face of Allied naval gunfire. This lesson was repeated at Anzio in early 1944, but the lesson continued to be ignored. German planning for the defense of the French coast still placed great reliance on a Panzer counteroffensive as a means to challenge Allied landings.

Operation *Vésuve* was the most obscure of the amphibious operations from an Anglo-American perspective. This was a landing by Free French forces to liberate Corsica from Italian occupation, exploiting the political chaos created by the Italian withdrawal from the war. This operation offered few technical or tactical lessons.

Operation *Shingle* at Anzio on January 22, 1944 was the culmination of the Allied landings in the Mediterranean theater and was a clear demonstration of the growing Allied technical skill at amphibious operations. On the other hand, its operational failure was due to the American unwillingness to provide adequate resources for its success. If Dieppe was a British warning to the Americans about unpreparedness in initiating a second front in 1942–43, Anzio was an American warning to the British that they had lost patience with the British peripheral strategy in the Mediterranean and demanded a landing in France in mid-1944.

SWEDEN

DENMARK

North Sea

Baltic Sea

Copenhagen

IRELAND

Hamburg • Wismar

• Stettin

Bremen

GREAT BRITAIN

NETHERLANDS

Amsterdam

The Hague • Arnhem

Berlin

POLAND

London

Brussels

Cologne

GERMANY

Jubilee
19 Aug 1942

BELGIUM

LUX.

Frankfurt

Prague

CZECHOSLOVAKIA

Cherbourg • Le Havre

Reims

Caen

• Brest

Troyes

Metz

Strasbourg

Munich

Salzburg

Vienna

Dijon

SWITZERLAND

AUSTRIA

HUNGARY

FRANCE

Lyon • Geneva

ITALY

Milan

Verona

Trieste

Zagreb

Venice

La Rochelle

• Royan

Turin

Po

Ravenna

YUGOSLAVIA

Bay of Biscay

Bordeaux

Genoa

Bologna

Marseilles

Perugia

Adriatic Sea

Toulon

CORSICA

Rome

Foggia

VÉSUVE
21 Sep 1943

Anzio

SPAIN

SHINGLE
22 Jan 1944

Naples

Salerno

PORTUGAL

Madrid

SARDINA

AVALANCHE
9 Sep 1943

SLAPSTICK
9 Sep 1943

Lisbon

TORCH
(Eastern TF)
8 Nov 1942

Mediterranean Sea

Messina

BAYTOWN
3 Sep 1943

TORCH
(Center TF)
8 Nov 1942

SICILY

Gibraltar

Algiers

Bone

La Marsa

Tunis • Carthage

HUSKY
10 Jul 1943

• Mostaganem

TORCH
(Western TF)
8 Nov 1942

SPANISH
MOROCCO

Oran

ALGERIA

TUNISIA

0 |————————————| 200 miles

• Rabat

0 |————————————| 200km

• Casablanca

17

MAP 4: GERMAN ASSESSMENT OF ALLIED DIVISIONS IN THE UK – MAY 31, 1944

This map shows the German appreciations of the Allied forces in the UK compiled by the army intelligence agency Fremde Heere West (FHW – Foreign Armies West) for May 31, 1944, the last such assessment prior to the D-Day invasion. Besides the divisions shown on the map, FHW assumed there were a further three infantry divisions, two armored divisions, and one airborne division for which the location was unidentified but presumed to be in southern England. In total, the FHW assessment tallied 79 Allied divisions (56 infantry, 15 armored, and 8 airborne) as well as 20 separate infantry, armored, and airborne brigades. In reality, this was a substantial overestimate. Actual Allied strength in the UK at the time was closer to 38 divisions (28 infantry, 6 armored, and 4 airborne) with the caveat that numerous US and Canadian divisions were arriving continually during this period. The FHW correctly identified the locations of about 27 of the 38 actual Allied divisions, and missed the locations of the remainder. In addition, they counted over 40 "ghost" divisions.

The overestimate was due to a number of factors. German intelligence networks in Britain had been compromised by British counterintelligence. Operation *Bodyguard* was a coordinated deception program, feeding false information to turned German agents, using fake radio networks to create a fictional order of battle, and creating dummy garrisons and port installations to fool German aerial reconnaissance. These actions were based on false invasion scenarios such as operations *Fortitude North* (amphibious landings in Norway, to tie down the 400,000 German troops there), *Fortitude South* (the Pas-de-Calais) and *Ironside* (the Bay of Biscay) to shield the actual landing plans in Normandy. Numerous Allied "ghost" divisions were part of the bluff. Berlin remained convinced well into August 1944 that Normandy was only the first of potentially several Allied amphibious operations using the numerous divisions assumed to be in Britain.

The FHW had no reliable method of comparing its assessments using other technical means. Owing to Allied air superiority over the UK, Luftwaffe photo-intelligence missions were not numerous enough to create an up-to-date aerial overview of military garrisons in the UK. Other traditional intelligence methods such as signals intelligence were not entirely useful. The Allied deception plans included radio transmissions from fake Allied ghost divisions, and actual divisions could limit their transmissions since landlines were available. Prisoner-of-war interrogations were of limited utility since the source of recent prisoners,

mainly from Italy, had little or dated information about forces back in the UK.

Aside from the difficulties of assessing the Allied order of battle, Berlin faced the dilemma of determining where and when the Allies would stage their main amphibious operation. The issue of "when" was perhaps the easiest to answer. It seemed apparent that an Allied landing would occur in the late spring or early summer of 1944. Determining the precise date proved elusive, largely owing to the Allied deception effort. Too many dates were offered by too many intelligence sources, essentially clouding the issue. The issue of "where" was a greater dilemma. Assessments through spring 1944 tended to place the landing site somewhere on the Pas-de-Calais since this was the narrowest section of the English Channel and offered the shortest route to Germany. This was reflected in the disposition of Wehrmacht units in France, as well as the construction of the Atlantic Wall. There was always a stipulation in these assessments that the landings might occur elsewhere, including on the Belgian or Dutch coasts, or even Brittany or the Bay of Biscay. This confusion was reflected in the dispersion of the Atlantic Wall defenses.

The Marinegruppenkommando (MGK) West (Naval Group Command West) began changing its assessment in the months prior to D-Day. The MGK West reacted skeptically to agent reports claiming a concentration of Allied shipping in the southeast of England, correctly judging that the majority was in fact in the Portsmouth area or to the immediate west. The MGK West assessments from April 26 and May 2, 1944 both suggested that the Allied landings might occur from the Somme all the way west to the Cotentin Peninsula. Assessments of Allied transport capability were poor, with little firm evidence of the number of critical landing ships, especially the LST. The MGK West believed that the Allies could deliver about eight divisions with conventional assault ships, but the number would expand to 13 divisions if the Allies had 120 LSTs available and 17.4 divisions if they had 220 LSTs.

Luftwaffe assessments in the pre-invasion months also hinted at a more westerly landing site. The Luftwaffe noted that the Allies seemed to be trying to isolate the future Normandy battlefield by attacks against the Seine bridges. Strikes against bridges across the Loire at Angers, Tours, and Orléans all pointed to an effort to isolate the Normandy region. In the event, neither the Kriegsmarine nor Luftwaffe intelligence estimates held much sway in Berlin or in the Oberbefehlshaber (OB) West (High Command West) headquarters in France.

Inverness

Aberdeen

SCOTLAND

Dundee

Firth of Forth

North Sea

Edinburgh

Glasgow

Newcastle

Edinburgh

Middlesbrough

NORTHERN
IRELAND

Belfast

ENGLAND

Hull

IRELAND

Liverpool

Sheffield

Nottingham

Leicester

Birmingham

Coventry

Cambridge

WALES

Northampton

Gloucester

Harwich

Swansea

Oxford

London

Cardiff

Bristol

Bristol Channel

Dover

Calais

Exeter

Hastings

Weymouth

Brighton

Plymouth

English Channel

Falmouth

Dieppe

N

	Allied Division identified (correct)
	Allied Division identified (mistake)
	Allied Division not identified

0   50 miles
0   50km

19

MAP 5: THE ATLANTIC WALL IN FRANCE – 1944

The German defenses against an anticipated Allied amphibious landing were called the Atlantic Wall. Construction of these defenses began in earnest in 1942, accelerating in 1943 as the possibility of an Allied landing increased. The density of defenses along the Atlantic Wall varied considerably owing to German intelligence assessments of Allied intentions. The English Channel was narrowest in the Pas-de-Calais area, and there were significant ports in the area, such as Boulogne and Calais. German planning assumed that it was the most likely point for an Allied landing. As a result, the Wehrmacht deployed its most formidable defenses in this sector.

Well into 1944, German intelligence believed that the Allies would try to seize a major port at the outset of the invasion to provide for their logistical needs. As a result, the major ports in the English Channel and the Bay of Biscay were heavily fortified and designated as *Festungen* (fortresses). The ports received extensive coastal fortifications, coast defense batteries, and other defenses to repel an Allied landing against the port itself and the surrounding area. These were by far the most heavily defended strongpoints of the Atlantic Wall.

The first defenses erected along the Atlantic Wall between the Festung ports were the coastal artillery batteries. In 1942 and 1943, these were deployed along the coast "like a string of pearls" as an economical means to cover France's long coastline until more elaborate infantry defenses could be created. The Atlantic Wall's coastal defense artillery was divided between Army (Heer) and Navy (Kriegsmarine) battalions. In general, the Navy tended to control the batteries near major ports while the Army controlled the batteries along the coast between the ports. The use of different types of coastal artillery battalions was due to the pernicious interservice rivalry in the Nazi state. The tactical doctrine between the two services differed. The Army battalions (Heeres-Küsten-Artillerie-Abteilungen) were intended to engage Allied forces near the shoreline and in the immediate beachhead area. For targeting, they relied on preregistration of fixed targets; the Navy criticized them because they had little capability against moving targets such as Allied ships. The Army derisively referred to the Navy battalions (Marine-Artillerie-Abteilungen) as the "battleships of the dunes." Each naval battery was organized like a landlocked destroyer with central fire-direction control that enabled the gun batteries to engage Allied ships. Although they had much better antiship capability than the Army batteries, they were generally not well deployed to provide fire support once the

Allied landing force reached the beach. The Navy also deployed light artillery battalions (leichte Marine-Artillerie-Abteilungen) which were intended for coast defense and which included numerous Flak batteries.

The Atlantic Wall was organized into Coastal Defense Sectors (Küsten Verteidigung Abschnitte – KVA), which generally consisted of an infantry division, plus the coastal fortifications and coastal defense gun battalions in that sector. The infantry divisions assigned to the coastal defense mission were a type called the Static Infantry Division (Infanterie-Division bodenständig). Compared to a normal infantry division, they suffered from a nearly complete lack of horses and motor vehicles. On the other hand, they had substantially greater firepower than normal infantry divisions as a result of the numerous weapons allotted to the coastal defense bunkers. The Static Infantry Divisions depended on substandard allotments of personnel, usually men from older age groups not suitable for deployment in active combat theaters. The average age in these divisions was 35–45 years old. Many of the Static Divisions stationed in Normandy were filled out with Volksdeutsche, nominally ethnic Germans from regions outside of Germany. Owing to severe manpower shortages by 1944, the Volksdeutsche category was extended to include large numbers of unreliable non-German troops such as Polish men from regions of western Poland absorbed into the Reich. The Static Divisions were further weakened by their dependence on even less reliable troops, the Osttruppen. These were former Red Army prisoners of war recruited into the Wehrmacht. While some Osttruppen were genuinely disaffected from the Soviet regime, most simply wanted to escape from the lethal prisoner-of-war camps. In some sectors such as Normandy, battalions of Osttruppen were substituted for normal German infantry battalions, much to the chagrin of local German commanders, who regarded them as untrustworthy should fighting break out.

The OB West was in overall command of the anti-invasion front, led by Generalfeldmarschall Gerd von Rundstedt. It controlled two army groups on the invasion front: Heeresgruppe B in northern France under Generalfeldmarschall Erwin Rommel, and Heeresgruppe G under Generaloberst Johannes Blaskowitz covering the Bay of Biscay and the Mediterranean coast. Each of the army groups had two field armies. Heeresgruppe B controlled 15.Armee in the Pas-de-Calais, and 7.Armee in Lower Normandy. Heeresgruppe G controlled 1.Armee on the Bay of Biscay and 19.Armee on the Mediterranean coast.

N

ENGLAND

Cardiff

Bristol

London

Thames

Portsmouth

Plymouth

English Channel

KVA A3

KVA A2

KVA B

Ostend

Bruges

Dunkirk

Calais

244

242

KVA C

Boulogne

48

204

1244

BELGIUM

Lille

PAS-DE-CALAIS

47

49

18 Lw

KVA D1

240

344

KVA D2

348

PICARDY

245

KVA E1

Dieppe

KVA E2

54

1253

1245

15

KVA J1

Cherbourg

1265

KVA G

KVA F

345

Le Havre

1254

266

UPPER NORMANDY

Channel Islands

7

243

260

709

519

KVA H2

KVA H1

352

716

711

Seine

Oise

Channel Islands

KVA J2

LOWER NORMANDY

Caen

1255

OB WEST

Marne

15

KVA A1

St-Malo

608

77

Paris

KVA A2

266

Chartres

Yonne

KVA B

343

Brest

262

1273

BRITTANY

Rennes

Le Mans

7

Orléans

Loire

265

KVA C1

Lorient

264

275

Vierzon

683

681

688

280

St-Nazaire

Nantes

Tours

B G

KVA C2

684

ÎLE D'YEU

685

158

282

Poitiers

FRANCE

Vichy

KVA D

ÎLE DE RÉ

686

1180

1181

ÎLE D'OLERON

687

1

Limoges

1282

284

Royan

708

Gironde Estuary

KVA E1

618

Bordeaux

Garonne

MASSIF CENTRAL

KVA E2

159

1287

Bay of Biscay

286

KVA F

276

Toulouse

Legend:

- Static division
- Infantry division
- *Marine-Artillerie-Abteilung*
- *Leichte-Marine-Artillerie-Abteilung*
- *Heeres-Küsten-Artillerie-Abteilung*
- *Festung* port
- **KVA** Coastal defense sector (*Küsten Verteidigung Abschnitt*)

0   75 miles

0   75km

CHAPTER 1

THE INVASION FRONT, JUNE 6, 1944

Troops of the 16th Infantry Regiment, 1st Infantry Division wade ashore from an LCVP on Omaha Beach
during the D-Day landings, June 6, 1944. (NARA)

MAP 6: ROUTES TO THE D-DAY INVASION BEACHES

The initial stage of Operation *Neptune* involved a complex naval plan to deliver the Allied forces to the target beaches in Normandy. Planning for the invasion of France was undertaken by COSSAC, starting in earnest in 1943. Allied intelligence had a very good appreciation of German defenses in France. Allied planning was complicated by the continual improvements in German forces along the French coast, especially after the appointment of Erwin Rommel as the head of the invasion front in the autumn of 1943.

Contrary to German assumptions, Allied planners did not favor a landing against a major French port. The failure of the Dieppe raid on August 19, 1942 certainly shaped this view, as did the extensive German Festung fortification of French ports in the aftermath of the Dieppe raid as part of the Atlantic Wall program. The Operation *Husky* landing on Sicily on July 10, 1943 provided a model for Operation *Neptune*. From an operational standpoint, *Husky* made it clear that it was possible to conduct a landing operation away from a deep-water port and to supply the landing force over open beaches. This was in no small measure due to Allied innovations in a host of new technologies including DUKW amphibious trucks, improved landing craft, and production of sufficient numbers of the larger landing craft such as the LCI (Landing Craft, Infantry), LCT (Landing Craft, Tank) and LST. The most innovative aspect of the *Neptune* plan was the creation of artificial harbors, codenamed Mulberry with one planned for the British sector off Arromanches-les-Bains, and one in the American sector at Omaha Beach. These were erected off the Normandy coast in the days after the D-Day landings.

The *Neptune* plan underwent continual alterations through the end of 1943 and into early 1944. The most important change occurred in January and February 1944 after the commander of Allied ground forces, General (later Field Marshal) Bernard Montgomery, was briefed on the initial plan to land with three divisions. Montgomery felt that the original plan did not deliver sufficient forces and wanted at least five divisions in the initial wave. The original strategic scheme was to conduct Operation *Neptune* across the English Channel against Normandy simultaneously with Operation *Anvil* across the Mediterranean against Provence in southern France. To build up sufficient naval forces for the main Normandy landing, it was necessary to delay Operation *Anvil* until later in the summer.

The expanded *Neptune* plan involved two naval task forces. The Western Task Force under Rear Admiral Alan Kirk was in charge of the two American beaches, with Force U under Rear Admiral Don Moon on the extreme western (right) flank at Utah Beach, and Force O under Rear Admiral John Hall at Omaha Beach. The Eastern Task Force under Rear Admiral Philip Vian contained three naval forces: Force J in the center under Commodore Geoffrey Oliver at Juno Beach, Force G under Commodore Cyril Douglas-Pennant at Gold Beach, and Rear Admiral Arthur Talbot at the easternmost flank at Sword Beach. Besides the main landing forces, there were two follow-up forces with additional landing ships and troops for reinforcements. Follow-Up Force B under Commodore Campbell Edgar supported the American Western Task Force, while Rear Admiral William Parry led Follow-Up Force L in support of the British/Canadian Eastern Task Force.

To prevent German discovery of the *Neptune* objective, the Allied naval forces were widely scattered along the southern English coast and farther north up the coast to Norfolk and beyond. Dummy forces were created as part of the Operation *Fortitude* deception plan, aimed at reinforcing the German view that the Allied landing would be conducted against the Pas-de-Calais. The primary Allied staging area was in Portsmouth, with the various naval forces gradually converging on the Area Z deployment zone in the darkness of June 5, 1944. The two naval task forces plus their considerable supporting elements were massed together in order to protect them against any potential German naval response, as well as to simplify the task of breaching the German minefields in the English Channel that shielded the Normandy coast.

WALES

Milford Haven

Swansea

Cardiff

Bristol

GREAT BRITAIN

D1 D2 D3

ENGLAND

London
Tilbury
Southend
Sheerness
L1

Felixstowe
Harwich
L2
L2

Dover
C2

Dungeness
E1

Boulogne

The Solent

Southampton
J1
G1
C1 J1
S2
Portsmouth

Shoreham Brighton
Newhaven
S1
S1
C2

Selsey
E1

I. OF WIGHT
E1
E1

Exeter

Poole

Weymouth
C2
O1
Portland
O1
E1

Torquay
U1
Brixham
U1
C2
Dartmouth
U1

Devonport
C1
Plymouth
U1 B1

Falmouth
B2

Area Z

German mine barrier

Dieppe

English Channel

ALDERNEY

GUERNSEY

Cherbourg

JERSEY

Assault area

Le Havre
Trouville
Rouen

Ouistreham
Caen

Seine

FRANCE

N

Embarkation Ports
S1 Sword Group 1, loading ports Newhaven and Shoreham
S2 Sword Group 2, loading port Portsmouth
J1 Juno Group, loading ports Southampton and Portsmouth
G1 Gold group, loading port Southampton
O1 Omaha Group, loading ports Weymouth and Portland
U1 Utah Group, loading ports Torquay, Brixham, Dartmouth and Plymouth
L1 Follow-up Group L, loading port Tilbury
L2 Follow-up Group L2, loading port Felixstowe
B1 Follow-up Group B1, loading port Plymouth
B2 Follow-up Group B2, loading port Falmouth

Covering Forces
C1 Covering forces destroyers
C2 Covering forces, coastal forces

Covering Forces
C1 Covering forces destroyers
C2 Covering forces, coastal forces

Bombarding Forces
D1 Eastern Task Force bombardment ships, assembly port the Clyde
D2 Western Task Force bombardment ships, assembly port Belfast

Blockships
D3 Corncob blockships, assembly port Oban

Mulberry Units
E1 Mulberry units, assembly ports Selsey, Dungeness, the Thames, Portland, Solent and Spithead

Swept channels
Coastal channels
Destroyer/frigate patrol lines
Coastal forces

0 _____ 50 miles
0 _____ 50km

MAP 7: NAVAL BOMBARDMENT ON D-DAY

The preliminary naval operation on D-Day was a bombardment of the coast. This bombardment had two principal objectives: to demolish German coastal artillery batteries in order to prevent them from interfering with the amphibious landing operation, and to soften up the German beach defenses by bombarding the most substantial German beach strongpoints. COSSAC had created the special Martian Committee in 1942 to monitor the German construction of coastal artillery sites, and the naval plan assigned specific ships to engage and destroy every identified battery. It is worth noting that the Wehrmacht began fortifying some of the divisional artillery battalions in Lower Normandy in the spring of 1944, and these were gradually added to the bombardment list as they were identified by the Martian Committee. The *Neptune* plan generally assigned one battleship or cruiser to each identified battery from the prelanding bombardment. Two of the gun batteries were considered to pose a significant enough threat that they were targeted by special forces operations on the morning of D-Day: the Pointe du Hoc Battery in the American sector between Utah and Omaha beaches, and the Merville Battery on the extreme eastern side of the *Neptune* landing site near Sword Beach.

The Longues-sur-Mer naval gun battery between Omaha and Gold beaches provides a good example of the naval bombardment force in action on D-Day. The battery was subjected to several bombing attacks in 1944, including two major raids in the week before D-Day, but none of the gun bunkers was disabled. On D-Day, it was assigned to HMS *Ajax*, which began firing at it around 0530hrs without causing major damage. After the preliminary naval bombardment, the battery began firing on the command ship HMS *Bulolo* around 0600hrs, forcing it to move station. HMS *Ajax* returned along with HMS *Argonaut* and began bombarding the battery again, ceasing fire around 0845hrs after two of its guns were knocked out by direct hits through the open embrasures. The cruisers had fired a total of 179 rounds against the

battery. The Longues-sur-Mer battery crew cleaned up the position in the late morning, and the remaining two guns opened fire again in the afternoon toward Omaha Beach, prompting the attention of the French cruiser *Georges Leygues*, which was defending the American sector. This final bombardment put the battery out of action for the last time on D-Day after it had fired 115 rounds during the course of the day. The battery was captured by British Army units on June 7, 1944.

The effectiveness of the naval bombardment plan has been controversial. Prior Allied amphibious operations in the Mediterranean that formed the basis for *Neptune* planning had not involved extensive beach fortification or substantial coastal artillery. Although the *Neptune* bombardment proved effective at most of the beaches, the bombardment of Omaha Beach was inadequate. Eisenhower had brought several Pacific veterans to the UK to offer their experiences, notably Major-General Charles "Cowboy Pete" Corlett, who had commanded the US forces in the Aleutians and again in the invasion of Kwajalein in February 1944. Corlett argued that the Pacific experiences were more relevant than the Mediterranean theater experiences owing to the closer similarities of Japanese beach defenses to German ones in Normandy. He argued for a more prolonged bombardment of the beaches, but his advice was largely ignored, leading to bitter recriminations after the landings.

Besides the naval bombardment plan shown here, the German defenses were also subjected to heavy air attack in the early morning hours of D-Day. As in the case of the naval bombardment, the results were mixed. Some sites were particularly hard hit. For example the Pointe du Hoc Battery was largely obliterated by a predawn raid by eight RAF Lancaster squadrons dropping 635 tons of bombs, or about 20 tons per acre. The air bombardment plan was far less effective elsewhere, for example at Omaha Beach, where the bombers dropped their payloads too far inland from the beaches to damage the German defenses.

N

English Channel

NCWTF	Naval Commander Western Task Force
NCETF	Naval Commander Eastern Task Force
NCBFA	Naval Commander Bombardment Force A
NCBFC	Naval Commander Bombardment Force C
NCBFD	Naval Commander Bombardment Force D
NCBFE and K	Naval Commander Bombardment Forces E and K
NCFG	Naval Commander Force Gold
NCFJ	Naval Commander Force Juno
NCFO	Naval Commander Force Omaha
NCFS	Naval Commander Force Sword
NCFU	Naval Commander Force U

Western Task Force Area

Eastern Task Force Area

St-Vaast-la-Hougue

Morsalines

HMS *Black Prince*

HMS *Erebus*

Bombardment Force A

Quinéville

PETER

QUEEN

ROGER

SUGAR

TARE

UTAH

ILES ST MARCOUF

USS *Tuscaloosa* (NCBFA)

USS *Quincy*

USS *Nevada*

USS *Bayfield* (NCFU)

USS *Augusta* (NCWTF)

Bombardment Force C

USS *Enterprise*

HNLMS *Soemba*

USS *Texas* (NCBFC)

USS *Ancon* (NCFO)

Bombardment Force K

HMS *Bulolo* (NCFG)

Bombardment Force E

HMS *Warspite*

Bombardment Force D

Le Havre
Grand Clos

Émondeville

UNCLE

St-Martin-de-Varreville

VICTOR

ABLE

BAKER

WILLIAM

OMAHA

HMS *Glasgow*

USS *George Leygues*

USS *Montcalm*

HMS *Ajax*
HMS *Argonaut*
HMS *Emerald*
HMS *Orion*
HMS *Flores*
HMS *Diadem*

HMS *Hilary* (NCFJ)

HMS *Ramillies*

HMS *Largs* (NCFS)

HMS *Roberts*

HMS *Scylla* (NCETF)

HMS *Danae*
HMS *Dragon*

HMS *Mauritius* (NCBFD)

HMS *Frobisher*

HMS *Arethusa*

Le Havre

Seine

CHARLIE

Pointe du Hoc

Maisy

Grandcamp

DOG

EASY

FOX

USS *Arkansas*

HMS *Belfast* (NCBFE and K)

JUNO

SWORD

Villerville

Carentan

Isigny

GREEN
WHITE
RED
GREEN
RED
GREEN

Port-en-Bessin

GEORGE

HOW

GOLD

ITEM

JIG

KING

LOVE
MIKE

NAN

OBOE

PETER

QUEEN

ROGER

GREEN
WHITE
RED
GREEN
RED

Langrune-sur-Mer

Benerville-sur-Mer

Longues

RED

GREEN

GREEN

GREEN

RED
WHITE
RED

Houlgate

Vaux-sur-Aure

Bény-sur-Mer

Colleville-sur-Orne

Ouistreham

Merville

Cabourg

Sallenelles

Bayeux

Caen Canal

Orne

Dives

Caen

German fortified zones and coastal guns

Flagships

0   10 miles

0   10km