

NAVAL HISTORY STEM-H LESSON PLAN

TEACHER HELP GUIDE

LESSON PLAN: The Nuclear Umbrella – Still Here After the Cold War

DEVELOPED BY: John Clark, science teacher and military historian, Deltona High School, Deltona, FL
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INSTRUCTIONAL GOAL: (history)

The Cold War period is required study under the educational standards of many states. This lesson offers an original way to cover that period in American history and potentially raise student achievement through its uniqueness.

BACKGROUND:

The Cold War is officially over but the threat from the evolution of nuclear weapons that created that war remains and is growing. Students need to understand that an attack on the United States by a nuclear weapon is still a very real possibility. Make the Cold War come alive for your students by using the resources and web site of the Cold War Gallery at the Naval Museum in Washington, D.C. to educate today's students about the realities of living under a nuclear umbrella. Focusing on the role of the Navy during this long and tense 45 year period is a great way to build student interest in learning about an important chapter in recent American history. Students will gain a perspective of how living under the nuclear umbrella has evolved to present day. Our future citizens need to internalize the continuing dangers and the threat to American life evolving from the spread of nuclear weapons around the globe. If you cannot come to the museum you can use its resources by taking your students on a virtual tour of the gallery. Keep them engaged as they complete the scavenger hunt activity while taking their on-line tour.



U.S. Navy in the Cold War: (10 minute intro video from the JFK Ready Room at the Cold War Gallery)
<http://www.youtube.com/watch?v=dVAtVFnu-Rk&feature=plcp>

General Cold War Summary: (See extended summary at the end of the Lesson Plan)

The Cold War was a sustained state of political and military tension between the powers of the Western world, led by the United States and its NATO allies, and the communist world, led by the Soviet Union, its satellite states and allies. This began after the success of their temporary wartime alliance against Nazi Germany, leaving the USSR and the US as two superpowers with profound economic and political differences. The Soviet Union created the Eastern Bloc with the eastern European countries it occupied,

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maintaining these as satellite states. The post-war recovery of Western Europe was facilitated by the United States' Marshall Plan, while the Soviet Union, wary of the conditions attached, declined and set up COMECON with its Eastern allies. The United States forged NATO, a military alliance using containment of communism as a main strategy through the Truman Doctrine, in 1949, while the Soviet bloc formed the Warsaw Pact in 1955. Some countries aligned with either of the two powers, whilst others chose to remain neutral with the Non-Aligned Movement.

The Cold War was so named as it never featured direct military action, since both sides possessed nuclear weapons, and because their use would probably guarantee their mutual assured destruction. Cycles of relative calm would be followed by high tension which could have led to war. The most tense involved the Berlin Blockade (1948–1949), the Korean War (1950–1953), the Suez Crisis (1956), the Berlin Crisis of 1961, the Cuban Missile Crisis (1962), the Vietnam War (1959–1975), the Yom Kippur War (1973), the Soviet war in Afghanistan (1979–1989), and the "Able Archer" NATO military exercises (1983). The conflict was instead expressed through military coalitions, strategic conventional force deployments, extensive aid to client states, espionage, massive propaganda campaigns, conventional and nuclear arms races, appeals to neutral nations, rivalry at sports events, and technological competitions such as the Space Race. The US and USSR fought proxy wars of various types: in Latin America and Southeast Asia, the USSR assisted and helped foster communist revolutions, opposed by several Western countries and their regional allies; some the U.S. attempted to roll back through subversion and warfare, with mixed results. To alleviate the risk of a potential nuclear war, both sides sought détente in the 1970s to relieve political tensions.

In the 1980s, the United States increased diplomatic, military, and economic pressures on the Soviet Union, at a time when the communist nation was already suffering from economic stagnation. In the late 1980s, Soviet President Mikhail Gorbachev introduced the liberalizing reforms of *perestroika* ("reconstruction", "reorganization", 1987) and *glasnost* ("openness", ca. 1985). This opened the country and its satellite states to a mostly peaceful wave of revolutions which culminated in the collapse of the Soviet Union in 1991, leaving the United States as the dominant military power. The Cold War and its events have left a significant legacy, and it is often referred to in popular culture, especially in media featuring themes of espionage and the threat of nuclear warfare.

RESOURCES:

Background on the Navy's role in the Cold War: http://usnavymuseum.org/About_ColdWar.asp

Background on the Cold War Gallery: http://usnavymuseum.org/About_Gallery.asp

Cold War Gallery You-Tube Channel:

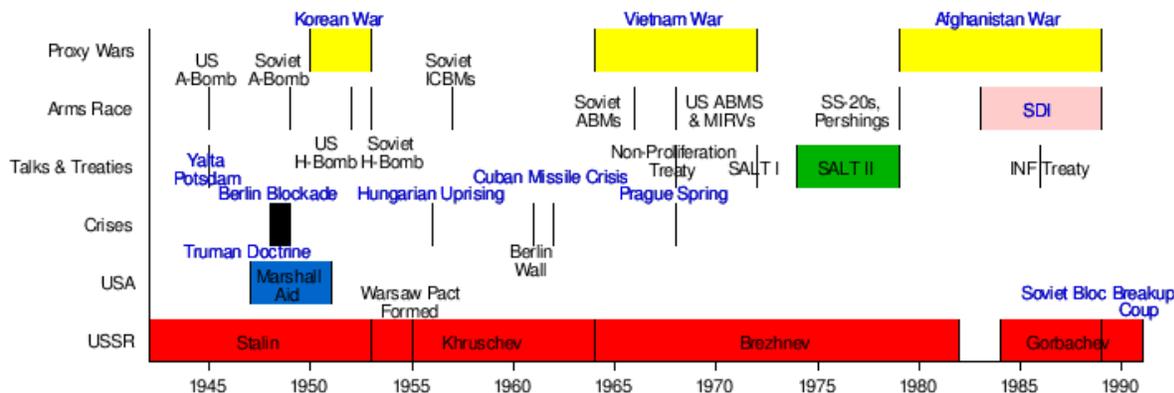
<http://www.youtube.com/user/coldwargallery/videos?sort=dd&flow=grid&view=0&page=1>

Overview – The US Navy in the Cold War Era: <http://www.history.navy.mil/wars/coldwar-1.htm>

Overview of Cold War from Wikipedia: http://en.wikipedia.org/wiki/Cold_War

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Cold War Time line:



STANDARDS:

Florida History Standards – Cold War:

» [SS.912.A.6.1: Examine causes, course, and consequences of World War II on the United States and the world.](#)
Cognitive Complexity: N/A | Date Adopted or Revised: 12/08

Belongs to: [Understand the causes and course of World War II, the character of the war at home and abroad, and its reshaping of the United States role in the post-war world.](#)

» [SS.912.A.6.10: Examine causes, course, and consequences of the early years of the Cold War \(Truman Doctrine, Marshall Plan, NATO, Warsaw Pact\).](#)
Cognitive Complexity: N/A | Date Adopted or Revised: 12/08

Belongs to: [Understand the causes and course of World War II, the character of the war at home and abroad, and its reshaping of the United States role in the post-war world.](#)

» [SS.912.A.6.11: Examine the controversy surrounding the proliferation of nuclear technology in the United States and the world.](#)
Cognitive Complexity: N/A | Date Adopted or Revised: 12/08

Belongs to: [Understand the causes and course of World War II, the character of the war at home and abroad, and its reshaping of the United States role in the post-war world.](#)

INSTRUCTIONAL PROCEDURES FOR LESSON:

Begin the lesson with the 10 minute video of the U.S. Navy’s role in the Cold War (in class or as homework). A more extensive reading assignment would be the authoritative document at the end of this section: **The U.S. Navy in the Cold War Era, 1945-1991** By Edward J. Marolda, Senior Historian, Naval Historical Center, Posted with permission of the Naval Historical Foundation.

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After the short or long introduction, introduce the Cold War Gallery website needed to complete the scavenger hunt activities: <http://www.usnavymuseum.org/CentralHall.asp>

INSTRUCTIONAL PROCEDURES FOR ACTIVITIES:

Article from the U.S. Navy Library on the history of the cold war:

DEPARTMENT OF THE NAVY -- NAVAL HISTORICAL CENTER 805 KIDDER BREESE SE --
WASHINGTON NAVY YARD WASHINGTON DC 20374-5060

The U.S. Navy in the Cold War Era, 1945-1991

By Edward J. Marolda, Senior Historian, Naval Historical Center
(Based on the chapter, "Cold War to Violent Peace," in W.J. Holland, Jr. ed. *The Navy*. Washington: Naval Historical Foundation, 2000. Posted with permission of the Naval Historical Foundation.)

Dawning of the Cold War

Soon after helping defeat Fascist tyranny in World War II, American sailors faced a new global threat to the United States and the values for which their nation had long been a standard bearer; democracy, basic human rights, and freedom. The USSR, under a murderous dictator, Joseph Stalin, acted to solidify the wartime conquests of the Soviet Red Army and advance the cause worldwide of Marxism Leninism, an ideology that subverted the very ideals most Americans then held sacred. Working with local Communist leaders and movements in the years after the war, Stalin eliminated the political and economic independence of Poland, Czechoslovakia, and other nations in Eastern Europe. He put diplomatic and military pressure on Turkey and Iran in the Middle East and supplied war material to Communists fighting to overthrow the government of Greece. In 1948, the Soviets sparked a confrontation with the United States and its European allies over control of Berlin, the occupied and divided capital of the defeated German nation.

In the Far East, regional Communist movements took the lead, but received military assistance from Moscow in efforts to eliminate opposing movements and governments. Ho Chi Minh led Vietnamese Communists and other nationalists against the French colonial government in Indochina. Kim Il Sung and his Korean Communist supporters engaged in a vicious struggle for political control of the Korean people with Syngman Rhee and his anti-Communist adherents. In 1949, Mao Tse-tung and his Chinese Communist armies pushed the forces of the Chiang Kai-shek government off the mainland of Asia and established the People's Republic of China.

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The United States, under the leadership of President Harry S. Truman, had already taken economic, political, and military steps to deal with the new threat posed by the Soviet Union and its allies. American taxpayers provided billions of dollars to restore the war-ravaged economies of Western Europe, under the Marshall Plan, and the similarly devastated Japanese economy. The U.S. government strengthened political ties with many like-minded anti-Communist governments around the globe. Finally, the Truman administration adopted a broad "Containment Strategy," in simplest terms a major effort to build a wall around the Communist world that would be defended by the armed might of the United States and its allies.

The United States Navy, its warships and aircraft--and above all its sailors-- guarded the ramparts of the containment wall from the beginning of the so-called "Cold War" to its victorious end. Soon after Stalin pressed Turkey and Iran for territorial and other concessions in 1946, Truman dispatched battleship *Missouri* (BB-63), an unmistakable symbol of American military power, to the Eastern Mediterranean. He wanted to make clear his determination that the United States would oppose aggressive Soviet actions. With establishment of the U.S. Sixth Task Fleet (later simply the U.S. Sixth Fleet) and creation of the North Atlantic Treaty Organization in 1949, it became clear to most observers that the United States meant to stand by its friends in the region.

Hot War in a Cold Place

President Truman moved decisively to defend American and allied interests in the Far East when Kim Il Sung's North Korean armed forces, equipped with Soviet tanks, artillery, and combat aircraft, invaded the Republic of (South) Korea on 25 June 1950. The commander in chief ordered U.S. air, ground, and naval forces to help South Korean and other United Nations forces resist the Communist attack. He also directed the U.S. Seventh Fleet based at Subic Bay in the Philippines to prevent the war from spreading to the waters and islands off China, where Chiang Kai-shek continued his fight against the Communist mainland government. Aircraft carrier *Valley Forge* (CV-45), the heavy cruiser *Rochester* (CA-124), and eight destroyers sortied from Subic Bay in the Philippines and made a show of force along the China coast. The presence of these Seventh Fleet forces off China deterred the Communists from launching a long-planned amphibious assault on Chiang's stronghold on the island of Taiwan. Truman's bold actions can also be credited with influencing Stalin to take back an earlier pledge to Mao of Soviet air support in Korea. For the rest of the Korean War, Seventh Fleet submarines, land-based patrol aircraft, and carrier task forces kept watch on the seas around Asia to discourage the USSR and the People's Republic of China from intervening in Korea with their naval forces.

The U.S. Navy took full advantage of its control of the sea and the air above it. On 2 July, little more than a week after the outbreak of war, the cruiser *Juneau* (CL-119), the British cruiser *Jamaica*, and the British frigate *Black Swan* intercepted North Korean torpedo boats and motor gunboats off the east coast of South Korea and destroyed five of the Communist naval vessels. The following day, aircraft from *Valley Forge* and the British carrier *Triumph* bombed Pyongyang, the capital and war-making heart of North Korea.

The Republic of Korea Navy (ROKN), with the key assistance of the U.S. Navy, added its firepower to the fight. The South Korean navy had only been created a few years before the war and had little operational experience. Another problem was the absence from Korea at the start of the war of Admiral Sohn Won Il, the Chief of Naval Operations. He was in the United States accepting the transfer of three former U.S. submarine chasers. With the agreement of South Korean authorities, the

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U.S. naval command provided an American officer to help direct the allied service for the short term. South Korean authorities agreed, so Commander Michael J. Luosey took operational control of the ROKN. During the next month, Luosey set up inshore patrol sectors on the coast, managed the redeployment by sea of South Korean marine forces, and helped stiffen allied maritime defenses around the southern and western coastlines. With the return to Korea of Admiral Sohn and his three ships, South Korean naval forces became even more effective at destroying Communist junks, motorized sailboats, and sampans trying to deliver reinforcements, ammunition, and supplies to the swiftly advancing North Korean ground troops.

U.S. naval aircraft and warships added their firepower to the UN campaign to halt the North Korean invading forces before they overran the entire peninsula. U.S. and allied cruisers and destroyers bombarded enemy units moving along coastal roads as Navy and Marine air units pummeled Communist troops and supply convoys heading south on inland roads. Simultaneously, the ships of the Navy's Military Sea Transportation Service reinforced and resupplied UN troops holding a small toehold on the peninsula near the key port of Pusan. Without fleet support, the UN forces in South Korea would have been forced to make a costly withdrawal like the British and French had at Dunkirk in World War II.

The Navy's mobility and command of the sea enabled General Douglas MacArthur and his UN command to reverse the tide of battle in Korea. In mid-September 1950, Vice Admiral Arthur Struble, Commander Seventh Fleet and also Commander of Task Force 7, led 230 amphibious and other ships into the Yellow Sea and toward the North Korean-occupied port of Inchon. As this armada approached the narrow channel leading to Inchon in the early morning hours of 15 September, a beacon suddenly shined from the top of a lighthouse that had been out of operation for some time. Inside the lighthouse was Lieutenant Eugene F. Clark, who had been executing a daring intelligence mission behind enemy lines since the beginning of the month. The brave and resourceful naval officer had been landed on a nearby island, Yonghung Do, with a small party of South Koreans and another American to learn about local tides, currents, and other information that would be valuable to allied amphibious planners. Clark and his men gathered their intelligence, fought a small naval action with the Communists in which the enemy lost two boats to accurate machine-gun fire, and repaired the light. The enemy overran Yonghung Do, caught and executed 50 villagers who had helped the Americans and South Koreans. But the "Blackbeard of Yonghung Do," as Clark would soon be called, avenged them by accomplishing his very important mission.

For days, naval gunfire support ships and carrier aircraft attacked enemy defensive positions ashore at Inchon. Then, at 0633 hours on 15 September, fleet amphibious landing craft disembarked the 5th Marine Regiment of the 1st Marine Division on Wolmi Do, an island in Inchon Harbor. After several days of hard fighting, and reinforcement by other marines, South Korean troops, and elements of the Army's 7th Infantry Division, the allies seized the port and nearby Kimpo airfield. On the 21st, U.S. Army units that had broken out of the Pusan Perimeter linked up with the Inchon forces. A week later, after bloody, street-to-street fighting, the 1st Marine Division captured Seoul. The amphibious units at Inchon suffered 3,500 killed, wounded, and missing but they inflicted 20,000 casualties on the enemy. More importantly, the Inchon assault, Operation Chromite, led to the disintegration of the North Korean People's Army and the liberation of South Korea.

General MacArthur hoped to destroy the enemy army completely and occupy northeast Korea with another amphibious assault, at Wonsan on the Sea of Japan. He intended that the Navy would land the X Corps at Wonsan. This corps would then advance overland to the Yalu River and the North

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Korean border with the People's Republic of China and the Soviet Union. Fast-moving South Korean troops, however, got to Wonsan on 10 October, a week before the planned landing. In addition, the Navy discovered—the hard way—that the Communists had emplaced between 2,000 and 4,000 Soviet-made magnetic and contact mines in the approaches to the harbor. A number of American and South Korean mine clearing vessels were sunk before the task force opened a safe passage into the port. At long last, on 25 October 1950, the 1st Marine Division began moving ashore and advancing into the forbidding mountains of North Korea.

The mobility resulting from the fleet's control of the waters off Korea also enabled MacArthur to withdraw his forces to the safety of the sea when the battle ashore turned against the UN command. This occurred when the "volunteers" of the Communist Chinese People's Liberation Army emerged from the snow-covered mountains of North Korea in November 1950 and fell upon overextended Army, Marine, and South Korean units. The X Corps, which included the 1st Marine Division, the Army's 3rd and 7th Infantry Divisions, and three South Korean divisions of the I and II Corps had to fight their way back to the coast in bitter cold and howling winds. Marine and Navy attack squadrons operating from fleet carriers *Philippine Sea* (CV-47), *Valley Forge* (CV-45), *Princeton* (CV-37), and *Leyte* (CV-32), and several escort carriers hit Chinese troops trying to surround UN units inland. In only one week of operations, naval aviators carried out 1,700 sorties against the enemy.

During these air operations to support the beleaguered men on the ground, Lieutenant (jg) Thomas Hudner, Ensign Jesse Brown, and two other F4U Corsair pilots from *Leyte*'s air group flew north of the Chosin Reservoir on the look-out for Chinese troops. Once there, Brown reported that his plane was losing oil pressure, perhaps after being hit by enemy ground fire, and that he had to crash land in the frigid, snow-covered mountains. The force of the crash was so severe that it separated the engine from the fuselage and badly twisted the latter. Brown survived the crash, but was injured and trapped in the cockpit. Fearing that fire would soon engulf the plane, Hudner called for a rescue helicopter (which he knew would take thirty minutes to arrive at the site) and decided to crash land his own Corsair next to Brown's to help rescue his squadron mate and friend. Hudner safely put his plane down in the snow not far from Brown's and rushed over to help him. Since Brown was already suffering from the extreme cold, Hudner covered the man's head with his spare wool cap and his hands with a scarf. Try as he might, however, Hudner could not free the pilot from the mangled cockpit. When Brown lapsed into unconsciousness from his injuries and the cold, and the pilot of the rescue helicopter told Hudner that they had to fly out of the mountains before nightfall or risk another crash, the lieutenant realized that they had to leave his friend behind. They had done all they could for Jesse Brown, the first African-American naval aviator to die in combat.

Meanwhile, most of the UN ground troops had fought their way to the coast, where battleship *Missouri* (BB-63) cruisers *Rochester* (CA-124) and *St Paul* (CA-73), and numerous destroyers and rocket vessels put a wall of fire between the infantrymen and the enemy. Navy and allied surface ships fired over 23,000 16-inch, 8-inch, 5-inch, 3-inch rounds and rockets at the Communist units trying to capture the port of Hungnam.

By Christmas Eve day, the Navy's Amphibious Task Force (Task Force 90) had completed the withdrawal by sea of 105,000 troops, 91,000 civilian refugees, 350,000 tons of cargo, and 17,500 military vehicles. Air Force and Marine planes airlifted out another 3,600 troops, 1,300 tons of cargo, and 196 vehicles. That day, 24 December 1950, Navy explosive demolition teams leveled the port facilities at Hungnam to deny them to the enemy, and the fleet steamed south. Within a few weeks,

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the units withdrawn from North Korea were back in the fight to preserve the independence of the Republic of Korea.

Throughout the Korean War, U.S. and allied naval forces maintained a tight blockade of North Korean waters so the enemy could not use the sea to transport troops and supplies. Control of the sea also allowed the UN command to threaten other amphibious landings in the rear of the Chinese and North Korean armies arrayed along the 38th parallel. The enemy took the threat seriously and positioned sizeable troop units along both coasts and far from the front lines where they were badly needed. To keep the enemy's attention focused on the sea, the fleet executed a number of naval feints and demonstrations. In Operation Decoy during October 1952, Navy aircraft carriers, battleships, cruisers, and destroyers attacked Communist defenses around Kojo and Task Force 90 maneuvered as if to land elements of the Army's 1st Cavalry Division near Wonsan. The enemy rushed forces to the coast to defeat amphibious assaults that never came.

The Navy also put special operations forces ashore on the east and west coasts of North Korea and on many of the thousands of islands that studded those waters. The blockade of Wonsan from 16 February 1951 to the end of the war kept the Communists from using the potentially important port. U.S. Navy underwater demolition teams, U.S. Marines, and British and South Korean naval commandos frequently destroyed highway bridges, supply dumps, railroad tracks, and railroad tunnels behind enemy lines.

A number of American warships operating in the waters off North Korea used their ship's whaleboat to carry the action to the enemy. Commander James A. Dare, the enterprising commanding officer of destroyer *Douglas H. Fox* (DD-779), manned his whaleboat with his most resourceful officers and daring bluejackets and equipped them with a 75-millimeter recoilless rifle, small arms, demolition charges, grenades, a radio, and tools for destroying fishing nets. Every night, the boat would sortie five to seven miles from the ship (within range of the destroyer's radios and surface search radar) to seize fishing boats and their crews and return both to the ship. By destroying North Korean nets, impounding their boats, and otherwise disrupting the local fishing activity, the U.S. naval force denied enemy troops ashore the bounty of the sea. In addition, quite often the prisoners would provide information on where the Communists had positioned their coastal artillery and the daily routines of the guns' crews. The sailors also practiced a little psychological warfare on the enemy. The night before May Day 1952-1 May was an especially important date in the Communist world-*Douglas H. Fox's* whaleboat sailors planted an American flag on an island at the mouth of Hungnam Harbor. Hence, as the sun rose at dawn in the east on the big day, the enemy's first sight was Old Glory gaily flapping in the sea breeze.

In a general sense, the battleships, cruisers, and destroyers of the Blockade and Escort Force (Task Force 95), and the naval air units operating from carriers and from shore airfields provided essential support to the U.S. and allied troops fighting this first "limited war" of the Cold War period. The U.S. Navy did not lose a single major warship in the Korean War. Over 1,177,000 Navy personnel served in Korea. 458 sailors were killed in action, 1,576 suffered wounds, and 4,043 succumbed to injury or disease. Without the dedicated service and sacrifices made by Navy men and women, ashore and afloat, the UN would not have been able to preserve the independence of the Republic of Korea or achieve the armistice agreement with the Communist belligerents that ended the conflict on 27 July 1953.

Global Confrontation

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Even before the Korean War and throughout the 1950s, sailors died during missions to gather military intelligence on the enigmatic and belligerent Union of Soviet Socialist Republics and People's Republic of China. In August 1949, for instance, submarines *Cochino* (SS-345) and *Tusk* (SS426) were deployed to the frigid waters off Norway and a little more than 100 miles from the Soviet Northern Fleet's bases at Murmansk and Polyarnyy to learn what they could about Soviet missile testing and other military activities. Without warning, batteries in *Cochino* exploded and badly burned one officer. Fire and noxious gases released by this and subsequent blasts spread throughout the submarine, endangering the entire crew. Two brave *Cochino* men, trying to bring help from nearby *Tusk*, were pitched into the bitterly cold water when their rubber boat overturned. Without hesitation, bluejackets from *Tusk* jumped in to help rescue their fellow sailors. Several men drowned in the valiant attempt and their bodies drifted silently off into the unforgiving northern waters. Finally, after herculean efforts by everyone, the surviving crewmen of both submarines gathered safely on board *Tusk*. The men watched helplessly as *Cochino*, gutted by fire and explosion, finally slipped beneath the waves.

Thousands of miles away off Siberia in September 1954, Soviet MiG fighters shot down a P-2V Neptune patrol plane, killing one of its crewmen. Two years later the Chinese Communists shot down a Navy P-4M Mercator reconnaissance plane flying over the sea along their coast. Many more sailors suffered death or injury due to heavy seas, fierce winds, or Arctic cold and ice as they carried out their duty to keep watch over potential enemy nations. Americans did not want a repeat of the surprise Pearl Harbor attack on the United States and its allies, especially in the dangerous nuclear age.

Tensions remained high in the Far East after the Korean War, as Ho Chi Minh's army defeated French forces at the climactic battle at Dien Bien Phu and established the Democratic Republic of Vietnam in the region of Indochina around Hanoi. Tens of thousands of northern Vietnamese decided they would rather live under a separate non-Communist Vietnamese government in southern Indochina than under the harsh, anti-religious regime of Ho Chi Minh and his Communist supporters. To facilitate this major population transfer, the U.S. Navy mounted Operation Passage to Freedom. The Pacific Fleet concentrated 113 tank landing ships, transports, and other vessels in the South China Sea. Between August 1954 and May 1955, these ships carried over 310,000 Vietnamese civilians, many of them Catholics, from north to south Vietnam. This group of immigrants soon became the core of support for the anti-Communist Ngo Dinh Diem's new government of the Republic of Vietnam.

Meanwhile, Mao Tse-tung's Chinese Communists intensified their efforts to eliminate the opposition to their government posed by Chiang Kai-shek and his Nationalist supporters, who still held many islands, including the large island of Taiwan, off the coast of China. In September 1954 the Communists began shelling Quemoy Island and announced their intention to seize Taiwan. Truman had ordered Seventh Fleet aircraft, destroyers, and submarines to patrol coastal waters to prevent a Communist invasion of Taiwan at the start of the Korean War and his successor, Dwight D. Eisenhower, was even more determined to support Chiang Kai-shek's anti-Communist Republic of China government. As a result, the President proposed and the Congress approved a resolution in January 1955 pledging U.S. military assistance for the defense of Quemoy and nearby Matsu Island, if to do so helped protect Taiwan itself. The two nations also put into force a mutual defense treaty. The growing U.S. interest in the security of Japan and the anti-Communist governments in South Korea, South Vietnam, and Taiwan required the continuous presence of the U.S. Seventh Fleet in Far

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Eastern waters throughout the Cold War. The Navy's repair and supply bases at Yokosuka in Japan and on Okinawa, at Subic Bay in the Philippines, and on Guam supported this powerful commitment to the defense of America's Asian allies.

The Naval-Industrial-Scientific Partnership

Back home in the United States, the Navy strengthened its partnership with industry and the scientific establishment to meet the military demands of the Cold War. That partnership had served the nation well during World War II. The nuclear age, dramatically ushered in with the explosion of an atomic bomb over Hiroshima, Japan, in August 1945, took on special meaning for the Navy when it tested the impact of nuclear weapons on its warships at Bikini Atoll in the Marshall Islands during the summer of 1946. The two detonations, one at low altitude and the other in shallow water, sank only a few ships but demonstrated dramatically that nuclear weapons and their radioactive fallout could wreak great havoc on man and machine.

Under the strong guiding hand of Rear Admiral Hyman G. Rickover, a determined and persuasive advocate of nuclear propulsion, the Navy commissioned *Nautilus* (SSN-571), the world's first nuclear-powered warship, on 30 September 1954. The following year, the service commissioned the 59,630-ton *Forrestal* (CVA-59), the lead ship of a class of "super carriers" designed to handle the new A-1J Savage and other jet-powered naval aircraft. Within a few years the Navy was operating carrier squadrons that were equipped to drop nuclear bombs.

Crises in the Mediterranean and the Far East

In addition to symbolizing the U.S. commitment to NATO and the defense of Western Europe against Soviet aggression, the Sixth Fleet in the Mediterranean reflected the American interest in helping to resolve the bitter Arab-Israeli conflict that so troubled the region during the 1950s. In 1956, during the Suez Crisis, President Eisenhower ordered carrier forces deployed in strength to the Eastern Mediterranean and in 1958 directed the landing of U.S. Marines in Lebanon to support friendly governments in the volatile Middle East.

Conflict in the Far East during the late 1950s once again demanded the Navy's attention. In August 1958, the Chinese Communists began shelling Quemoy and Matsu islands in the Strait of Taiwan, attempting to cut off 100,000 Nationalist Chinese defenders from outside logistic support. At the President's direction, the Navy deployed six carrier task groups to the waters off China and began escorting Nationalist ships on their runs to resupply the islands. Eisenhower also entertained diplomatic action to resolve the crisis peacefully. Faced with American resolve, and lack of Soviet support, Mao Tse-tung's government in Beijing did not take additional incendiary actions and the crisis abated.

From 1959 to 1962, Laotian Communists, with the military assistance of Ho Chi Minh's government in Hanoi, launched guerrilla attacks intended to overthrow the generally pro-Western Laotian governments in the capital of Vientiane. On several occasions, Washington ordered Seventh Fleet carrier task forces into the South China Sea to demonstrate U.S. opposition to the Communists' actions. In 1962, President John F. Kennedy took the additional step of deploying U.S. Marines and U.S. Army troops into Thailand, an American ally to the west of Laos. In each crisis, the possibility that U.S. troops, backed by nuclear-armed American sea and air power, would move into Laos to

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protect the national government persuaded the Communists to limit their aggressive activity. But Southeast Asia remained an international hot spot.

New Frontiers

As trouble brewed in Asia, the Navy redoubled its efforts to provide the country with powerful tools to discourage or, failing that, defeat a Soviet nuclear attack on the United States itself. Admiral Arleigh Burke, Chief of Naval Operations for an unprecedented three tours, from 1955 to 1961, had a profound impact on the Cold War navy. The veteran warrior, known to many as "31-knot Burke" for his World War II exploits as a destroyerman, argued successfully that Navy-controlled, ballistic-missile launching submarines should be added to the nation's strategic defense force of land-based missiles and bombers. He was also a keen judge of leadership. Burke called on Rear Admiral William "Red" Raborn to oversee the development of America's first submarine-launched intercontinental ballistic missile. In only a few years, Raborn could report to Burke that he had accomplished his mission. On the last day of 1959, the Navy commissioned USS *George Washington* (SSBN-598) and in July 1960 the submarine made the first submerged launch of the Navy's new Polaris missile.

For the remainder of the Cold War, the Navy's ballistic submarine force served as one of the nation's most powerful deterrents to Soviet nuclear attack. The "boomers" of the SSBN force routinely spent months away from their bases at Holy Loch, Scotland, Rota, Spain, and on the U.S. East and West Coasts as they carried out their vital missions. The highly trained and professional sailors who operated these naval vessels had to endure a cramped, male-only existence at hull-crushing depths for long periods of time. That they did so willingly was a testament to their dedication to protecting the United States and its people. Only a few months before the launch of a Polaris missile, the Navy demonstrated what its undersea warships could do when nuclear-powered submarine USS *Triton* (SSN-585), under Captain Edward L. Beach, completed a 41,519-mile circumnavigation of the globe-submerged. Complementing the naval arsenal, in November 1961 USS *Enterprise* (CVN-65), the world's first nuclear-powered aircraft carrier, joined the fleet. She was followed by nuclear-powered cruisers and destroyers.

During this period, the Navy Department was starring in another environment-space. In May 1961 Commander Alan Sheppard became the first human to pass beyond earth's atmosphere when his Mercury capsule, Freedom 7, blasted off from Cape Canaveral, Florida, and reached an altitude of 116.5 miles. When his craft descended from space and safely splashed into the Atlantic Ocean, helicopters from the aircraft carrier USS *Lake Champlain* (CVS-39) were on hand to recover him from the sea. The following February Marine Lieutenant Colonel John H. Glenn Jr. traveled 81,000 miles in space when he made three orbits of the earth in his Project Mercury capsule, Friendship 7. The destroyer USS *Noa* (DD-841) retrieved the now-famous officer when he and his capsule touched down in the Atlantic.

Cuban Missile Crisis

Many Americans were exhilarated in February 1962 about the potential benefits to humankind of technology and space travel. But this euphoria turned to anxiety in October when U-2 reconnaissance planes operated by the Central Intelligence Agency discovered work underway in Communist Fidel Castro's Cuba, only 90 miles from Florida, to construct launch sites for Soviet nuclear-armed ballistic missiles. As President John F. Kennedy gathered additional information on Soviet activities in Cuba,

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he ordered the concentration of naval and other forces in the Atlantic and Caribbean and preparation for likely contingencies. The *Enterprise* and *Independence* (CVA-62) carrier task groups put to sea as did six Polaris submarines based in Holy Loch, Scotland. The American armed forces went to a heightened state of alert worldwide.

Along with U.S. intelligence organizations, the Navy's aerial reconnaissance units joined the effort to investigate the goings-on in Cuba. In one such operation, Commander William B. Ecker, a combat veteran of World War II and Commanding Officer of Light Photographic Squadron (VFP) 62, nicknamed "Fightin Photo," led six aircraft on a mission over the island from the airfield at Key West, Florida. At a speed of 350 knots and an altitude of 400 feet, the advanced F8U-1P Crusaders filmed a targeted site. Even though the Cubans would later shoot down the plane of Air Force Major Rudolph Anderson, killing him, they did not fire on Ecker's planes. The unit returned to Florida, here the film was quickly removed from the aircraft, processed, and dispatched on the highest priority to Washington. Under orders, Ecker jumped back in his plane and flew to the nation's capital. The tired, sweaty naval officer raced over to the Pentagon to provide his personal analysis of the mission to the Joint Chiefs of Staff. Ecker, his men, and other brave Americans brought home conclusive evidence that Soviet Premier Nikita Khrushchev and Castro were building a nuclear-armed redoubt on the island of Cuba.

In the evening of 22 October, President Kennedy informed the world what American intelligence had discovered in Cuba and announced that he had ordered a naval quarantine, a blockade, to prevent further transportation of Soviet offensive weapons to the island. To discourage rash Soviet behavior at sea, the Navy established Task Force 135 and Task Force 136, which consisted of antisubmarine carriers, cruisers, and close to 30 destroyers and guided missile frigates, and deployed them into the Atlantic and the eastern Caribbean. Navy shore-based patrol planes kept a close watch over Soviet submarines and merchant ships steaming toward Cuba. To demonstrate American resolve, on 26 October a party of sailors from destroyers USS *John R. Pierce* (DD-753) and USS *Joseph P. Kennedy* (DD-850) stopped and searched the Lebanese-flagged merchantman *Marucla*, which carried Soviet goods destined for Cuba. Since the vessel held no military cargo, she was allowed to proceed. Other Soviet vessels reversed course before they reached the American quarantine line.

Finally, Khrushchev communicated to Kennedy that he would withdraw Soviet offensive weapons from Cuba if the United States promised not to invade the island and remove its own missiles, already planned before the crisis, deployed in Turkey, a NATO ally. Kennedy agreed. By the end of November, Navy carrier and shore-based aerial reconnaissance units reported the dismantling of Soviet missile batteries ashore. Surface ships and other air patrol units then verified the presence of missile tubes and long-range bombers on Soviet merchantmen as the ships left Cuban ports and headed for the USSR. The crisis was over. By employing U.S. naval forces, the President had been able to achieve his strategic objectives and deal with a dangerous and well-armed adversary without having to start a war.

The Naval War in Vietnam

The U.S. Navy was faced with another challenge in the early 1960s in faraway Southeast Asia, where the Vietnamese Communists pursued their goal of unifying Vietnam under Ho Chi Minh. Beginning in 1959, the North Vietnamese began constructing the Ho Chi Minh Trail through southern Laos and into the mountains of South Vietnam. They transported arms and other supplies via this land route

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and by sea to the Communist Viet Cong guerrillas in South Vietnam and initiated an armed struggle to overthrow the government of the Republic of Vietnam.

The Navy's unmatched capability to project its power ashore, maintain control of the sea, and logistically support a major overseas commitment of the American armed forces enabled its involvement in the Vietnam War. Furthermore, Vietnam's long coastline, thousands of islands, and many miles of inland waterway demanded the use of naval forces.

For the Vietnam War, the Navy operated under different chains of command. Commander Seventh Fleet took his orders from the Commander in Chief, U.S. Pacific Fleet (CINCPACFLT), who in turn followed the direction of the Commander in Chief, Pacific Command (CINCPAC). The latter, always a Navy admiral headquartered in Hawaii, oversaw the air campaigns waged against the enemy in North Vietnam, Laos, and later in the war, Cambodia. CINCPAC theoretically commanded the subordinate Commander U.S. Military Assistance Command, Vietnam. COMUSMACV, General William C. Westmoreland and then General Creighton Abrams, operated virtually autonomously. These generals directed the actions of the III Marine Amphibious Force and the U.S. Naval Forces, Vietnam (NAFORV) command, which handled Navy river, coastal, advisory, special operations, and logistical commands in South Vietnam. Far down the chain of command, U.S. naval forces routinely executed policies and operations engineered in Saigon or even more distant Hawaii and Washington.

Such was the case with the famous Tonkin Gulf Incidents of August 1964. Dissatisfied with the course of the South Vietnamese government's fight against the Communists, President Lyndon B. Johnson and his Secretary of Defense, Robert S. McNamara, decided to put military pressure on the North Vietnamese, who directed and largely fueled the conflict in the South. The U.S. leaders believed that naval force could be used to make Ho Chi Minh cease his support for the Viet Cong. The U.S. Navy supplied the Republic of Vietnam Navy with Norwegian-built fast patrol boats (PTF), trained their crews, and maintained the vessels at a small base in Danang. In a covert operation, named 34A, these patrol boats shelled radar stations along the coast of North Vietnam and landed saboteurs to destroy bridges and other military targets inland. Lack of accurate intelligence about the enemy, however, hampered the effectiveness of these operations.

As a result, U.S. leaders in Washington ordered the Navy to put greater emphasis in its longstanding Desoto Patrol on North Vietnam. The Desoto Patrol involved destroyers in intelligence-gathering missions outside the territorial waters and along the coasts of Communist countries, including the Soviet Union, China, and North Korea. As a result, in early August 1964 the destroyer USS *Maddox* (DD-731), under the command of Captain John J. Herrick, carried out an intelligence cruise along the littoral of the Democratic Republic of Vietnam in the Gulf of Tonkin. Shortly before, the South Vietnamese patrol force had bombarded targets further to the south.

The North Vietnamese were frustrated by their inability to catch the South Vietnamese boat force. And, knowing of the American connection to Operation 34A, on 2 August the Communists dispatched three Soviet-built P-4 motor torpedo boats to attack *Maddox*. The torpedoes they fired missed their target but one round from a Communist deck gun hit the American destroyer. Planes sent from the aircraft carrier USS *Ticonderoga* (CVA-14) to support *Maddox* shot up the trio of attackers and left one boat dead in the water. The destroyer steamed safely out of the area.

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The Johnson administration was surprised that Hanoi not only failed to back down to U.S. pressure but responded to it in such a hostile manner. Washington, and naval leaders in the Pacific, however, decided that they could not retreat from this open Communist challenge to the Seventh Fleet.

Maddox was reinforced with destroyer USS *Turner Joy* (DD-951) and the pair were sent back into the Gulf of Tonkin to continue the intelligence mission. On the night of 4 August, the two warships reported making contact and then being attacked by several fast craft far out to sea. Officers in the naval chain of command and U.S. leaders in Washington were persuaded by signals intelligence and other information that North Vietnamese naval forces had fired torpedoes at the two destroyers, although most analysts now believe that an attack never occurred. Acting swiftly, the President ordered Seventh Fleet carrier forces to execute a strike mission against North Vietnam, which took place on 5 August. Planes from carriers *Ticonderoga* and USS *Constellation* (CVA-64) hit an oil storage site at Vinh and damaged or destroyed about 30 enemy naval vessels in port or along the coast. More importantly, on 7 August the U.S. Congress overwhelmingly passed the Tonkin Gulf resolution, which allowed Johnson to employ military force as he saw fit against the Vietnamese Communists.

The Communists did not relent. In late 1964, guerrillas destroyed American combat planes at Bien Hoa airfield north of Saigon and on Christmas Eve set off a bomb at a bachelor officer's quarters in the South Vietnamese capital, killing two Americans and wounding over 100 Americans, Australians, and Vietnamese. Despite their own injuries, three Navy Nurses serving with the Navy's Saigon Station Hospital immediately administered medical treatment to other wounded personnel. Afterward, the commander of the Navy's Headquarters Support Activity, Saigon, awarded the brave women Purple Heart medals and recognized their selfless dedication to duty.

The enemy followed up the latter bombing with attacks in early 1965 on the U.S. Embassy in Saigon and American military facilities in Pleiku and Qui Nhon during which more Americans died. As a result of these Communist outrages, the Johnson administration ordered a full-scale bombing campaign against North Vietnam.

The aircraft carriers of the Seventh Fleet's Task Force 77 played a major role in U.S. bombing operations when the war began in earnest during March 1965. The carriers and their cruiser and destroyer escorts steamed at Yankee Station in the Gulf of Tonkin and, for over a year, Dixie Station southeast of Cam Ranh Bay. The Rolling Thunder, Linebacker, and other campaigns involved the bombing of enemy power plants, fuel and supply facilities, highway and railroad bridges, and rail lines in North Vietnam and Laos.

Early in the war, massive, multi-carrier "Alpha Strikes" were typical. In one such action, the air wings from USS *Coral Sea* (CVA-43) and USS *Hancock* (CVA-19) went after North Vietnamese radar sites on the coast and on Bach Long Vi, Nightingale Island, in the Gulf of Tonkin. The 70-plane operation knocked out the mainland facilities but had to return to finish the job on the island. During this strike, enemy antiaircraft guns blackened the sky with shell bursts as *Coral Sea's* attack aircraft dove through the cloud ceiling. The Communists focused their fire on lead aircraft, soon hitting the planes of three American squadron commanders. Commander Jack Harris, Commanding Officer of Attack Squadron 155, ejected from his stricken plane, parachuted safely into the sea, and floated around for a while contemplating his unhappy situation. To his surprise, the periscope of an American submarine broke the surface and he was soon safely on board for the vessel's return to the depths of the Gulf of Tonkin. The leader of Attack Squadron 153, Commander Pete Mongilardi, used his years of flying naval aircraft and professional skill to nurse his plane home. Fuel streamed from

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many holes in his badly damaged A-4 Skyhawk so he arranged to rendezvous with an A-3 tanker en route to *Coral Sea*. The two planes, connected by a refueling hose, then flew together back to the ship, where Mongilardi made a successful recovery. Commander William N. Donnelly, who led Fighter Squadron 154, had an even more dramatic experience. He ejected from his shot-up F-8 Crusader fighter moments before it hit the water and he sustained severe injuries in the process.

Despite a dislocated shoulder and six cracked vertebrae, Donnelly inflated a life raft and with great effort climbed in. For the rest of the day and into the night, the naval aviator floated just off the island, bathed in flame and smoke from the American air strike. Searchlight beams played across the water as the enemy tried in vain to find the downed American flyer. Forty-five hours after Donnelly hit the water, planes from *Hancock* spotted him. Soon an HU-16 amphibian aircraft landed close by and an Air Force paramedic jumped into the water. As circling sharks closed to investigate, the airman eased the injured pilot into the plane and safety. The Americans were more successful a few months later when a group of Fighter Squadron 21 F-4 Phantom II jets flying a combat air patrol over Thanh Hoa were pounced upon by four North Vietnamese MiG 21s. As the enemy planes closed on the American formation, Commander Louis C. Page and his radar intercept officer, Lieutenant Commander John C. Smith, fired off a Sparrow air-to-air missile that seconds later hit and destroyed one of the attackers. Almost at the same time, Lieutenant Jack E. Batson and his back-seater, Lieutenant Commander Robert B. Doremus, launched another Sparrow, which also flamed a MiG. The remaining pair of assailants immediately turned tail and headed home.

As the air war went on, year after year, the naval command adopted different tactics to improve the effectiveness of the carrier strikes, while minimizing losses of men and planes. One approach was the use of two or single-aircraft strikes. One such operation involved the all-weather, day-night A-6 Intruder attack plane crewed by Lieutenant Commander Charles B. Hunter and his bombardier/navigator, Lieutenant Lyle F. Bull. They volunteered to carry out an extremely risky night attack on a railroad ferry slip in Hanoi, which was ringed with a lethal array of surface-to-air missile batteries, antiaircraft artillery sites, and MiG bases. On 30 October 1967, the Intruder launched from *Constellation* in the Gulf of Tonkin, flew fast and low through the mountain valleys of northeast North Vietnam, and got to within eighteen miles of the target before the enemy discovered its presence. Then, the on board electronics intercept equipment indicated that Communist radar had detected them. Hunter flew the plane close to the treetops and "jinked" to left and right to avoid the SA-2 "flying telephone pole" surface-to-air missile that soon lit up the night as it streaked at and then past them. In the glow of antiaircraft fire and searchlights crisscrossing the sky, the intrepid aviators pressed home their attack dropping eighteen 500-pound bombs on the railroad ferry slip. The pair saw the ordnance obliterate the target as they banked and escaped into the night.

During this period, the Navy's carrier squadrons were destroying two enemy fighters for every one they lost; an unacceptable win-to-loss ratio. As a result of intensive air-to-air combat training at California's Miramar Naval Air Station, the "Top Gun School," the ratio improved to 12-to-1 during air operations in 1972 and early 1973. Lieutenant Randy Cunningham and Lieutenant Willie Driscoll, graduates of the Top Gun School, demonstrated that they had paid attention in class. During the early days of the Linebacker Campaign, the F-4J Phantom crewmen shot down two MiGs. Then, on one momentous day, 10 May 1972, these men of *Constellation's* Fighter Squadron 96 bagged three "bandits."

Surface ship sailors also helped reduce the enemy's fleet of MiG interceptors. From the first year of the war to the last, the Navy positioned a cruiser equipped with advanced radars and communications

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between the enemy coast and Task Force 77. The warship, with the call sign "Red Crown," was responsible for keeping track of aircraft, friend or foe, flying over eastern North Vietnam and the Gulf of Tonkin. The ship often warned U.S. strike aircraft of approaching MiGs and directed escorting fighters toward the threat. In August 1972, guided missile cruiser USS *Chicago* (CG-11)'s Senior Chief Radarman Larry Nowell was awarded the Navy Distinguished Service Medal for helping American air units destroy twelve North Vietnamese MiGs.

Despite the earnest efforts of American aviators and fleet sailors, the multi-year Rolling Thunder, Linebacker, and other major air operations did not achieve their objective of cutting Communist supply lines. Moreover, the campaign resulted in the death or capture of 881 Navy pilots and other aircrew and the loss of 900 aircraft. But, the campaigns inflicted substantially higher personnel losses on the enemy, destroyed an enormous amount of war material, and delayed and weakened Communist ground offensives throughout Indochina. Carrier-based planes also provided essential close air support to U.S. and allied ground forces fighting North Vietnamese Army and Viet Cong forces in South Vietnam. Helicopters and fixed-wing aircraft operating from Seventh Fleet destroyers and carriers executed search and rescue missions that saved hundreds of U.S. aviators whose aircraft went down in North Vietnam and Laos or at sea.

As in Korea and World War II, Navy warships were on hand in the Vietnam War to project their firepower ashore. Battleship USS *New Jersey* (BB-62), 8-inch and 6-inch gun cruisers, and destroyers poured a deluge of fire on bridges, radar sites, rail lines, and coastal artillery positions in North Vietnam. The enemy's coastal batteries fought back, hitting a number of U.S. ships and killing and wounding sailors. The North Vietnamese, however, failed to sink even one U.S. combatant. Joined by Vietnam Navy, Royal Australian Navy, and U.S. amphibious and patrol vessels, the Seventh Fleet's major warships also ranged along the 1,200-mile coast of South Vietnam to strike Viet Cong troop concentrations, supply caches, and fortifications. During the enemy's Easter Offensive of 1972, the fleet's bombardment force took a huge toll of North Vietnamese tanks and troops advancing south on the coast against the city of Hue.

Naval amphibious forces exploited the sea to hit the enemy at different locations along the length of the coast of South Vietnam, from the Demilitarized Zone (DMZ) in the north to the Gulf of Siam in the south. These landings included large-scale assaults involving many ships, aircraft, and troops; combat raids; and intelligence-gathering missions. In Operation Starlite during August 1965, the war's most successful amphibious assault, Navy amphibious vessels deployed Marine units ashore which then linked up with Army of Vietnam forces to encircle and destroy the 1st Viet Cong Regiment. Afterward, large enemy units avoided the coastal areas and employed only booby traps and snipers to oppose allied amphibious operations. The naval command then used the Navy-Marine Corps Amphibious Ready Group/Special Landing Force as a floating reserve, especially during the climactic ground battles along the DMZ in 1967 and 1968. Rested, rearmed, and resupplied marines could be quickly deployed ashore to reinforce their comrades.

Navy chaplains, doctors, and hospital corpsmen served in every large Marine unit, both afloat and ashore. They shared the dangers of an infantryman's life in the hot, overgrown jungle, in the shell-pocked hills along the demilitarized zone, and in the lethal streets of Hue during the Tet Offensive of 1968. Casualties were especially high among hospital corpsmen. As one of many examples of courage and self-sacrifice, on 19 March 1969 Hospital Corpsman Second Class David R. Ray was serving with a Marine artillery battery near the town of An Hoa. Before dawn the enemy launched a rocket, mortar, and ground attack on the American position, immediately wounding many marines.

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Petty Officer Ray moved from position to position giving medical help and in the process was hit by enemy fire. He continued moving about assisting his comrades.

Despite his serious wounds, Ray then killed an attacker and wounded another while continuing to bandage downed marines. When the sailor ran out of ammunition, the Communists wounded him again and threw a grenade into the position. Before he died, Ray threw his body across that of a wounded marine, saving the man's life. Petty Officer Ray was awarded the Medal of Honor. Such courage was not uncommon among the sailors who served ashore in Vietnam.

The U.S. Navy was also charged with establishing and then maintaining control of the sea off Vietnam and the air above it. The North Vietnamese operated close to 100 combat aircraft and 40 motor gunboats and fast attack craft, but only on a few occasions did they challenge the American fleet in the Gulf of Tonkin. In August 1964 and July 1966, the Communists dispatched P-4 torpedo boats against the Seventh Fleet. The attackers were either sunk or forced to beat a hasty retreat back to North Vietnam. As they had in Korea, Chinese "volunteers" entered the combat arena to fight alongside their Communist allies. At various times, 50,000 Chinese soldiers operated antiaircraft guns, built coastal fortifications, or repaired damaged bridges, railroads, and roads. Because of the U.S. power at sea, however, the Chinese did not interfere with naval operations.

In Operation Market Time, the U.S. Navy, Vietnam Navy, and U.S. Coast Guard largely shut down the seaborne infiltration effort started by the Communists during the early 1960s. Destroyers, mine warfare ships, Coast Guard cutters, gunboats, patrol craft, shore-based patrol planes, and high-powered coastal radars made it almost impossible for the North Vietnamese to slip one of their munitions-laden, 100-ton supply ships past the Market Time patrol. Allied naval forces destroyed or forced back to North Vietnam all but two of the 50 steel-hulled trawlers that tried to run the blockade between 1965 and 1972. Hanoi did manage to get supplies through to its forces fighting in South Vietnam, via the port of Sihanoukville in "neutral" Cambodia and the Ho Chi Minh Trail, but it took much longer and cost the Communists untold lives and military resources.

While denying the enemy free use of the sea, the U.S. Navy exploited its control of the vast Pacific Ocean to maintain an expeditionary force of a half-million men and women on the Asian continent, far from the sources of supply in the United States. Military Sealift Command ships transported 95% of the ammunition, fuel, vehicles, supplies, and other war materials that reached U.S. forces in South Vietnam. Navy Seabee construction units built thousands of bridges, fortifications, and encampments, paved thousands of miles of road, and developed the huge Navy-Marine Corps logistics bases at Danang and Saigon.

The U.S. Navy was as vital to the war effort ashore as it was afloat. Commander U.S. Naval Forces, Vietnam was responsible for securing the many rivers and canals that wound their way through the lush, tropical landscape of South Vietnam. In Operation Game Warden, Navy river patrol boats (PBR) moved along the major rivers of the Mekong Delta and further north near Hue. The mission of these units was to deny the enemy use of the waterways for transporting guerrillas and supplies. Every day, the young warriors of the Navy's River Patrol Force stopped and searched sampans and similar small craft for hidden munitions and other contraband. The discovery of Viet Cong guerrillas operating on the river, which occurred often, led to fierce gun battles at close quarters.

One action that stands out involved Boatswain's Mate First Class James E. Williams, who received the Medal of Honor for his extraordinary bravery and leadership on 31 October 1966. That day

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Williams, patrol commander for his boat, River Patrol Boat 105, and another patrol boat, was searching for Viet Cong guerrillas operating on the Mekong River. Suddenly, Communists manning two sampans opened fire on the Americans. When Williams and his comrades wiped out one boat crew, the other one escaped into a nearby waterway. The sailors followed and soon found themselves in a hornet's nest of enemy activity as Viet Cong soldiers fired rocket propelled grenades and other weapons from fortified river bank positions. Despite overwhelming odds, Williams repeatedly led his unit against several concentrations of enemy junks and sampans and called for support from the heavily armed UH-1B Huey helicopters of Navy Helicopter Attack (Light) Squadron 3, the "Seawolves." When that help arrived, he resumed the attack in the failing light, boldly turning on his boats' searchlights to illuminate enemy forces and positions. As a result of the three-hour battle, the American naval force killed numerous Viet Cong guerrillas, destroyed over fifty vessels, and disrupted a major enemy logistic operation.

Equally important to the war on the rivers were the service's highly trained, motivated, and courageous SEAL (Sea, Air, and Land) naval special forces. Small detachments of SEALs operated routinely in Viet Cong-controlled areas gathering intelligence and killing or capturing key enemy personnel. Navy mine countermeasures units, despite losing a number of minesweeping boats to enemy rocket propelled grenades and command-detonated mines, kept the tortuous, 45-mile channel from the sea to Saigon, a major logistics hub in southern South Vietnam, open throughout the war. Sharing these inland operating areas was the joint Army-Navy Mobile Riverine Force, which consisted of heavily armed and armored monitors, troop carriers, assault support patrol boats, and combat troops from the U.S. Army's 9th Infantry Division. Much like the soldiers of General Ulysses S. Grant and the sailors of Admiral David Dixon Porter, who fought together on the Mississippi River in the Civil War, the American fighting men of the Mobile Riverine Force often closed with the enemy. In battle after battle, the naval force deployed troops on the flanks and rear of Communist combat units and with American helicopter teams decimated the foe.

After several years of war, however, the enemy had begun to find ways of countering the allied river patrol and river assault operations. The guerrillas shifted their resupply activities to small rivers and canals and the main force North Vietnamese Army and Viet Cong combat units either avoided contact with the Mobile Riverine Force or waited for the right opportunity to spring deadly ambushes.

To regain the initiative, Vice Admiral Elmo R. Zumwalt Jr., a dynamic officer who took charge as COMNAVFORV in the fall of 1968, followed a new strategic approach, which he named SEALORDS (Southeast Asia Lake, Ocean, River, Delta Strategy). The thrust of the SEALORDS campaign was to establish closely patrolled sectors along the Cambodian border (where the enemy brought most of his munitions and supplies into South Vietnam) and penetrate Viet Cong strongholds in the almost impenetrable marsh and swampland areas of the Mekong Delta. The enemy resistance to this new strategy was fierce and sustained during 1969 and 1970, but the allies established increasing control of the targeted areas. Coupled with the U.S. and South Vietnamese incursion into Cambodia in the latter year, the SEALORDS campaign severely hindered enemy operations in the Mekong Delta. An indication of the allies' success was the ability of the South Vietnamese to deploy an Army of Vietnam infantry division out of the Mekong Delta to fight elsewhere during the Communist Easter Offensive of 1972.

Another important aspect of the SEALORDS campaign was the emphasis on improving the combat performance of the Vietnam Navy. Since 1950, thousands of American naval advisors had worked especially hard to prepare their Vietnamese counterparts for operating the ships, coastal and river

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craft, planes, weapons, and equipment that the Vietnam Navy received in U.S. military assistance programs. The objective of this effort was to enable Vietnamese sailors to carry on the fight with the Communists largely on their own. The mission became especially important after 1968, when the new administration of President Richard M. Nixon began withdrawing U.S. military forces from the war in Southeast Asia. Eventually, the Vietnam Navy was ranked the fifth largest in the world with 42,000 men and women and 1,500 naval vessels. While the Vietnam Navy had the weaknesses of the other South Vietnamese armed forces, its sailors often fought with courage and self-sacrifice against the Communists.

The powerful Pacific Fleet could have stopped the enemy from using neutral merchant ships to transport war materials into Cambodia or North Vietnam, but President Johnson did not want to provoke open Soviet or Chinese intervention in the war so he prohibited a blockade. In 1972, however, President Nixon was confident there would be no opposition from Moscow or Beijing, so he ordered the Seventh Fleet to mine the waters of North Vietnam. Navy and Marine attack aircraft from aircraft carrier *Coral Sea* dropped thousands of mines in the approaches to Haiphong and North Vietnam's other major ports. With no merchant ships bringing in supplies of surface-to-air missiles or other munitions, the Communist war effort quickly lost steam. The Seventh Fleet's mining of North Vietnam's ports in 1972 and 1973, in conjunction with the Air Force-Navy Linebacker bombing campaign, helped end America's involvement in the long, frustrating war by inducing the enemy to agree to reasonable cease-fire terms and to release all American prisoners of war.

Despite the best efforts of American, South Vietnamese, and Cambodian fighting men, however, in April 1975 Communist forces seized Phnom Penh, the capital of Cambodia, and Saigon, the capital of South Vietnam. That month, in operations Eagle Pull and Frequent Wind, the Seventh Fleet evacuated thousands of American and allied personnel from Cambodia and South Vietnam. The following month, Communist Khmer Rouge guerrillas seized the U.S. merchant ship *Mayaguez* and her crew off Cambodia. A boarding party of sailors and marines from frigate USS *Harold E. Holt* (DE-1074) retook the ship, which had been abandoned by the Cambodians earlier that day. Suspecting that the crewmen were being held on nearby Koh Tang Island (actually they were held elsewhere and subsequently released by their captors), the U.S. command in Thailand dispatched a strong force of marines, Air Force helicopters, and the guided missile destroyer USS *Henry B. Wilson* (DDG-7) to investigate the site. The operation to land on Koh Tang resulted in the death of 18 servicemen, wounding of another 50, and combat loss of three helicopters, but demonstrated that the United States would not tolerate the seizure of its ships on the open sea.

In contrast to the Khmer Rouge guerrillas, the sailors of the Seventh Fleet came to the aid of seafarers during the next several years as U.S. naval vessels rescued thousands of Vietnamese "boat people" fleeing political and religious persecution and economic deprivation in the new Socialist Republic of Vietnam.

1,842,000 men and women of the U.S. Navy served in Southeast Asia. 2,600 sailors died in the conflict and 10,000 suffered from wounds, disease, and injury. This was service for which America's sailors could be proud, because their sacrifice and dedication to duty helped the United States win the Cold War, of which the conflict in Vietnam was a significant part.

Global Responsibilities and a Changing Navy

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Despite its heavy commitment to the war in Southeast Asia, the U.S. Navy was responsible for other security missions around the globe during the 1960s and 1970s. The Seventh Fleet kept watch over northeast Asia while the Sixth Fleet asserted a powerful presence in the Mediterranean. In both theaters, hostile forces attacked U.S. warships.

In June 1967, Israeli planes and motor torpedo boats unexpectedly attacked USS *Liberty* (AGTR02), an intelligence ship gathering information on the Arab-Israeli war that had just broken out. After the first attack, the Israelis struck again. In both instances hostile fire killed and wounded many *Liberty* officers and bluejackets. In the emergency, the Commanding Officer, Commander William L. McGonagle, displayed extraordinary courage and professionalism. Despite being seriously wounded and under fire, he stayed at his post on the shot-up bridge to coordinate defense of the ship, the work of damage control parties, and medical treatment for the many wounded sailors. As a result of his steady and skillful leadership, *Liberty's* crewmen efficiently extinguished fires that were ravaging the ship and prevented further flooding. He was instrumental in saving the ship. Not until a U.S. destroyer had reached the scene, seventeen hours after the start of the attack, did the bleeding and injured officer relinquish his post on the bridge so that his wounds could be treated. Even then, he insisted that the more grievously wounded of his shipmates get medical care first. Commander McGonagle received the Medal of Honor for his worthy leadership and valor under fire.

As demonstrated in the *Liberty* incident, America's Cold War sailors often risked life and limb to do their duty, even during periods of "peace." This point was reemphasized the following February, when North Korean naval forces fired on and seized USS *Pueblo* (AGER-2), another intelligence-collection vessel operating in international waters in the Sea of Japan. For the next year, the North Korean Communists imprisoned and tortured her crewmen, coercing some to sign "confessions" of guilt and to make political radio broadcasts.

Other American sailors died to help the Navy meet the serious threat posed by an increasingly capable and globe-ranging Soviet navy. As their fellow submariners in USS *Thresher* (SSN-593) which went down in 1,400 fathoms of water east of Boston in April 1963, the men of USS *Scorpion* (SSN-589) paid the ultimate price for their country when the ship imploded on the bottom of the Atlantic in the spring of 1968. The loss of these submarines and their crews reenergized the Navy's efforts to make America's submarine fleet the safest and most capable in the world. Throughout the Cold War, the U.S. attack submarine fleets that operated in all the world's oceans, but especially in the Atlantic, became more and more effective at finding and trailing Soviet submarines, often without the knowledge of the latter. Both U.S. and Soviet submariners knew that if war broke out between their nations, the Americans had a decided advantage with their technologically superior warships and professional skills.

The 1970s marked a watershed in the social history of the U.S. Navy. Under the spirited stewardship of Admiral Zumwalt, who served as Chief of Naval Operations from 1970 to 1974, the Navy Department worked to accomplish the full integration into the naval service of African-Americans and women. In April 1971, Samuel L. Gravely became the first black American to achieve promotion to flag rank and the following April, Alene B. Duerk became the first female to do so when she took charge of the Navy Nurse Corps. Zumwalt, however, was dissatisfied with the status of blacks and women in the Navy. He initiated measures to increase their recruitment and retention, better their chances for promotion, and eliminate everyday discriminations. To shake up the personnel bureaucracy and eliminate needless regulations for all sailors, Zumwalt issued a series of Navy-wide directives, labeled "Z Grams." He also took steps to improve communication between officers and

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enlisted personnel. Not all of Zumwalt's actions succeeded, and his unconventional approach angered many traditionalists, but the Navy was long overdue for changes that the American people expected to see in the armed forces. Zumwalt's successors continued his work, such that the first women entered the U.S. Naval Academy in July 1976. Two years later other Navy women began serving on board naval vessels other than the traditional hospital ships and transports.

One unique Navy woman was Rear Admiral Grace Murray Hopper, who dedicated her life to improving the Navy's information technologies and systems. Early in her career, she helped develop the Navy's first computers, including the Mark I, II, III, and UNIVAC systems. Perhaps her greatest achievement was to pioneer the development of COBOL, a computer language that non-mathematicians could understand and employ. When Hopper retired from the service in 1966, the Navy realized it could not lose her unique skills and brought her back on active duty for an indefinite time. During this period, she served as Director, Navy Programming Languages Group in the Office of the Chief of Naval Operations (OP-90). Grace Hopper served in the Navy for two more decades. When she finally retired, Rear Admiral Hopper was awarded the National Medal of Technology and many other distinctions. But, she considered her highest award to have been "the privilege and honor of serving very proudly in the United States Navy."

The Middle East remained a troubled region during the 1970s. In the Arab-Israeli Yom Kippur War of October 1973, the Sixth Fleet protected U.S. transport planes that flew emergency supplies of weapons and ammunition from the United States to the Israelis, who were fighting desperately to survive the Arab onslaught. Soon, however, the Israelis launched devastating counterattacks that threatened to overwhelm the Egyptian army. The Soviet Union moved strong naval forces into the Eastern Mediterranean and prepared to fly paratroopers into Egypt to prevent the Israeli military from completely crushing the Egyptians. The Nixon administration put U.S. forces on alert worldwide and ordered the reinforced Sixth Fleet into waters off Egypt to signal the opposition of the United States to the proposed Soviet measures.

At the same time, Washington helped arrange a cease-fire between the belligerents and redoubled efforts to bring lasting peace to the region. In this vein, in 1974 the Navy deployed mine countermeasures forces, which had recently opened the mined waters off North Vietnam to merchant traffic, into the Eastern Mediterranean. Between April and December, Task Force 65 cleared mines from the Suez Canal and assisted in the removal of numerous ships sunk there during the war. Guided missile cruiser USS *Little Rock* (CLG-4) was among the first ships to transit the newly opened canal.

The Maritime Strategy and a 600-Ship Navy

By the mid-1970s, a muscle-flexing Soviet Union began to cause serious concern in Washington. The USSR spent enormous resources on its war-making establishment, hoping to take advantage of America's post-Vietnam retrenchment. The Soviets deployed thousands of mobile, intercontinental ballistic missiles and other nuclear-armed weapons, built up large ground and air forces in Eastern Europe and the Far East, and aided Communist guerrilla movements in Africa, Asia, and Latin America. Of greatest concern to the U.S. Navy, Soviet naval forces increased their presence around the world, challenging America's overseas interests and control of the sea. A 1975 Soviet naval exercise, *Okean 75*, involved 220 ships and new, long-range bombers in mock strikes against the continental United States. Soviet warships steamed brazenly in all the world's oceans, and even in the Gulf of Mexico. As a symbol of the changing naval balance of power, Soviet surface combatants and

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patrol planes began operating from the American-built base at Cam Ranh Bay in Vietnam. Just before he retired as Chief of Naval Operations in June 1978, Admiral James L. Holloway III concluded that the U.S. Navy then had only a "slim margin of superiority" over the Soviet navy. President Ronald Reagan was elected President partly on his pledge to restore America's military superiority. In addition to strengthening the nation's strategic retaliatory arm with advanced B-1B bombers, deploying Pershing II theater missiles to Europe, and producing sophisticated Abrams main battle tanks and Bradley armored fighting vehicles, his administration dramatically increased the size and capability of the U.S. Navy. In 1981 USS *Ohio* (SSBN-726), the largest submarine ever built and the first of her class, was commissioned. The ship carried 24 Trident I nuclear missiles, each one capable of hitting targets 4,000 miles distant. Stepped up was construction of the 90,000-ton, nuclear-powered *Nimitz*-class carriers, *Los Angeles*-class nuclear attack submarines, and the *Ticonderoga*-class guided missile cruisers equipped with the revolutionary Aegis anti-air warfare system. Also joining the fleet during the 1980s were Tomahawk land attack, Harpoon anti-ship, and high-speed, anti-radiation (HARM) missiles; improved versions of the F-14 Tomcat fighter, A-6 Intruder attack, and EA-6B Prowler electronic countermeasures aircraft; and the new F/A-18 Hornet strike fighter. The venerable battleships USS *Iowa* (BB-61), USS *New Jersey* (BB-62), USS *Missouri* (BB-63), and USS *Wisconsin* (BB-64) once again put to sea with their awesome 16-inch guns and new Tomahawk surface-to-surface missile batteries.

With these advanced instruments of sea power, naval leaders concluded that if it came to war with the USSR, the Navy should follow a new strategy—a Maritime Strategy. Admiral Thomas B. Hayward and his successor as Chief of Naval Operations, Admiral James D. Watkins, argued that the Navy should exploit its inherent flexibility and mobility by hitting the enemy when and where he was most vulnerable. Rather than passively trying to guard America's sea lines of communication to Europe, the fleet should mount offensive operations in northern Europe and the Far East and force the Soviet Union to fight a disadvantageous two-front war.

Watkins and John Lehman, an outspoken, forceful, and media-wise Secretary of the Navy, persuaded Congress and many citizens that the Maritime Strategy was the right approach, and that the nation needed a "600-ship Navy" to carry it out. By 1990, the Navy had not reached the 600-ship number, but did operate the most powerful fleet on earth with 15 carrier battle groups, 4 battleship surface action groups, 100 attack submarines, and scores more cruisers, destroyers, frigates, amphibious ships, and auxiliaries. Along with the new and improved ships, aircraft, and weapons came additional resources to recruit, retain, and train the professional sailors who were so essential to modern operations.

Hostilities in the Middle East and the Caribbean

As it had throughout its 200-year history, the U.S. Navy responded to a number of international crises during the 1980s. The decade began with Colonel Muammar Qaddafi, the mercurial and belligerent leader of Libya, announcing that the territorial waters of his nation extended far out into the international waters of the Mediterranean. He announced that if any U.S. ships or aircraft proceeded south of 32.30' north latitude, a demarcation he labeled the "line of death," his forces would attack them.

To back up his outrageous claim, on 19 August 1981 Qaddafi dispatched two Soviet-built SU-22 Fitter ground attack planes toward the American fleet. First contact with the single-seat, single-engine jets was made by Commander Henry M. "Hank" Kleemann and his back-seater, Lieutenant

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David J. Venlet, who were flying a combat air patrol in their F-14 Tomcat fighter. On their wing was the F-14 of Lieutenant Lawrence M. Muczynski and Lieutenant (jg) James P. Anderson. The Libyans were challenging one of the most lethal combat aircraft then in service. The F-14s were equipped with a radar that could detect another plane 200 miles away and could track as many as twenty-four targets at the same time. The Tomcats were armed with short-range AIM-9L Sidewinder heat-seeking missiles and medium-range AIM-7F Sparrow radar-guided missiles. The two missile types had taken a huge toll of Communist aircraft in Southeast Asia.

Venlet and a carrier-based E-2C Hawkeye early warning plane picked up the approaching "bogeys," or unidentified contacts, about 80 miles from the F-14s and approaching fast. The Libyans increased their speed to 550 knots. Fearing that the contacts might have hostile intent, the two F-14s got into a "loose deuce" formation that had served naval aviators well in Korea and Vietnam. Muczynski moved his fighter, with the call sign of "Fast Eagle 107," 4,000 feet above and slightly forward of Kleemann in "Fast Eagle 102." Whenever the Americans changed the direction of their flight, Libyan ground controllers directed the Fitters to do the same. The Americans upped their speed to 550 knots and soon made visual contact with the Fitters. In a standard "eyeball/shooter intercept" tactic, Kleeman kept his jet flying straight toward the Fitters as Muczynski maneuvered his aircraft to get to the "six" or vulnerable rear of the fast-approaching jets. As Kleeman changed course to fly parallel with the Libyans, one of the Fitters suddenly fired an Atoll heat-seeking missile at him at a distance of 1,000 feet. The Libyan missed, but Kleeman did not. He worked his fighter behind the Fitter, now clearly a "bandit," and destroyed the plane with one Sidewinder missile. Meanwhile Muczynski had outmaneuvered his opponent and launched a Sidewinder that tore the second Fitter apart in a bright explosion. Both Libyans managed to eject from their flaming aircraft and parachute safely to the sea for later rescue. In this first American air-to-air victory since the Vietnam War, the Navy dramatically underscored President Reagan's determination to meet Qaddafi's challenge head-on. The Middle East continued to draw U.S. attention in 1982, when President Reagan ordered the Sixth Fleet to deploy U.S. Marines into Lebanon as part of a multinational peace-keeping force whose mission was to separate the Israeli army and its chief foe, the Palestine Liberation Organization. The U.S. fleet then oversaw the evacuation by sea of the PLO. As American marines increasingly came under fire from hostile militia groups in Lebanon, U.S. cruisers and destroyers provided gunfire support. Matters came to a head on 23 October 1983, when a militiaman bent on martyrdom crashed a truck packed with 2,000 pounds of high explosive into the Marine barracks in Beirut, killing 241 marines and other Americans. The situation worsened that December, when Syrian anti-aircraft fire downed two Sixth Fleet aircraft, resulting in the death of one naval aviator and the capture of Lieutenant Robert O. Goodman. For the first time since the Vietnam War, battleship *New Jersey* fired her 16-inch guns in combat, bombarding hostile militia positions ashore. Finally, deciding early in the new year that the United States has nothing to gain by retaining forces in the war-torn country, the President ordered their withdrawal.

Meanwhile, another crisis had developed in the Caribbean when Marxists on the island of Grenada seized control of the government. With evidence that the Cuban Communists intended to develop a military presence in Grenada and fearful for the safety of American students there, Reagan directed that American forces led by Vice Admiral Joseph Metcalf III occupy the island. On 25 October, in Operation Urgent Fury, Navy SEALs secured Government House in the capital of St. Georges while Marine helicopters operating from amphibious assault ship USS *Guam* (LPH-9) landed troops at Pearls Airport and later in the day at Grand Mal Bay. Simultaneously, Army paratroopers of the 82nd Airborne Division dropped onto an unfinished airstrip at Point Salinas. Aircraft and ships of the *Independence* task group ensured that there would be no external interference with the operation. By

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the 27th, American forces had overcome spirited resistance by some 1,000 Cuban and Grenadan Marxist troops, rescued the American students, and liberated the island. The operation cost the lives of 18 Americans and revealed communications and other deficiencies, but resulted in elimination of the Cuban presence and restoration of democratic government on the island.

The Middle East continued to command attention as various radical terrorist groups and the Libyan government preyed on American citizens and U.S. interests in the region. In December 1984, radical Shiite Muslims hijacked a Kuwaiti airliner and killed two American passengers. The following June, other terrorists in the *Hezbollah* organization seized an American passenger plane and ruthlessly murdered U.S. Navy Petty Officer Robert D. Stethem, who died with great courage and dignity. In October 1985, four terrorists seized the Italian cruise ship *Achille Lauro*, killed wheel-chair bound Leon Klinghofer, an American citizen, and threw his body into the sea. The perpetrators of this grisly murder were captured shortly afterward when F-14s from USS *Saratoga* (CV-60) intercepted an airliner bearing the men and forced the plane to land at a U.S. base in Sicily, where they were turned over to Italian authorities.

Qaddafi trumpeted Libya's support for these and other anti-American outrages. Determined not to stand idly by in the face of these provocations, the President ordered the 27,000-man Battle Force Zulu, composed of aircraft carriers USS *Coral Sea*, USS *America* (CV-66), and USS *Saratoga*, twenty-three other warships, and 250 aircraft into waters north of Libya. When U.S. ships and aircraft crossed Qaddafi's "line of death" on 24 March 1986, the Libyans fired shore-based surface-to-air missiles at the planes and sent three fast missile attack craft toward the fleet. During the next two days, American air-launched missiles and bombs knocked out the missile site on shore, sank two of the vessels, and damaged the third.

Apparently, Qaddafi was not chastened by the experience, because in early April U.S. and British intelligence organizations intercepted communications that proved Libyan agents had exploded a bomb in the La Belle Discotheque in West Berlin, Germany, killing two Americans and injuring many more.

The President ordered execution of El Dorado Canyon, a one-time Navy-Air Force strike on military and terrorist-associated targets in Libya to punish Qaddafi for his actions. The French and Spanish governments did not allow U.S. military aircraft to fly over their countries. As a result, the United Kingdom-based U.S. Air Force units had to follow a course over the Atlantic and Mediterranean that required four in-flight refuelings to reach Libya and four more to return to Great Britain. In contrast, the Sixth Fleet deployed the *Coral Sea* and *America* carrier battle groups within easy striking range of the Libyan coast. In the early morning hours of 15 April 1986, in a surprise attack, Navy and Air Force combat aircraft crossed the Libyan coast, quickly neutralized the enemy air defenses, and dropped their ordnance on aircraft on the ground, barracks, and other military targets near Tripoli and Benghazi. All but one Air Force plane and its two crewmen, who were killed, returned to base. The operations against Libya during 1986 clearly demonstrated that Qaddafi's rogue behavior could have serious consequences for him and his country. They also showed once again that the U.S. government could employ naval power to achieve short-term political objectives without putting troops on shore or going to war.

The Tanker War

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The U.S. Navy had little respite from crises in the Middle East during the turbulent 1980s. In 1987 Iran, led by the virulently anti-American government of Ayatollah Khomeini, and at war for seven years with nearby Iraq, employed surface-to-surface missiles, fast attack vessels, and mines to curtail oil traffic in the Persian Gulf. The Iranians hoped to cut off this source of revenue for its enemy Iraq by attacking the oil tankers owned by Kuwait, a country from which the Iraqis got financial support. Since the economic well being of the world depended on the ready availability of Persian Gulf oil, President Reagan agreed to a Kuwaiti request that their tankers be allowed to fly the American flag and thus receive the protection of the U.S. Navy. By the end of the year, there were thirteen American cruisers, destroyers, frigates, and minesweepers steaming in the gulf and escorting U.S.-flagged Kuwaiti tankers. Close at hand east of the Strait of Hormuz were an aircraft carrier, battleship USS *Missouri*, and their escorts.

Dangers abounded in the volatile Persian Gulf. At night on 17 May 1987, for instance, an Iraqi F-1 Mirage mistakenly launched two Exocet air-to-surface missiles against USS *Stark* (FFG-31), killing thirty-seven sailors and coming close to sinking the frigate. The surviving crewmen, however, applied training they had received in damage control to save the ship. A few months later, *Bridgeton*, one of the re-flagged tankers, struck a sea mine laid by the Iranians. U.S. Army AH-6 Sea Bat helicopters, operating from the deck of USS *Jarrett* (FFG-33), a guided missile frigate, discovered the Iranian vessel *Iran Ajr* putting mines in the water one night. U.S. naval forces captured and then sank her. Iranian-inflicted damage to another re-flagged tanker and to American frigate USS *Samuel B. Roberts* (FFG-58) in April 1988 sparked more U.S. retaliation. On the 18th, warships, Navy carrier aircraft, and Marine helicopters destroyed two Iranian platforms in the gulf and sank or severely damaged three Iranian naval vessels. In contrast to these positive actions, on 3 July guided missile cruiser USS *Vincennes* (CG-49) mistakenly shot down an Iranian airliner, killing all aboard the plane. Finally, Iran, recognizing the futility of the anti-shipping campaign and exhausted after eight years of war, soon agreed to a cease-fire with Iraq. The U.S. Navy's operations during the so-called "Tanker War" not only kept the oil flowing to a thirsty global economy but persuaded America's friends in the region that the United States could be counted on to oppose aggression. The importance of this perception would be clear a few years later.

War in the Persian Gulf

The U.S. Navy's dominance of the waters around the Arabian Peninsula and its capacity for bringing naval power to bear against the enemy ashore were vital to the UN coalition's victory over Saddam Hussein's armed forces in the Persian Gulf War.

When Iraqi forces stormed into Kuwait on 2 August 1990, warships of the U.S. Middle East Force were in the Persian Gulf defending U.S. interests, as they had been since 1949. In short order, the USS *Independence* (CVN-69) carrier battle group changed course in the Indian Ocean and headed toward the gulf. *Eisenhower* and her escorts deployed from the Eastern Mediterranean through the Suez Canal and into the Red Sea. Within five days, the air wings of both carriers were in range to attack advancing Iraqi armored vehicles and supply convoys, had Saddam decided to invade Saudi Arabia,

As these forces steamed in harm's way, President George Bush began forging an international coalition to oppose the Iraqi aggression and in Operation Desert Shield ordered the deployment of powerful American forces to the troubled region. As detailed in Operation Plan 1002, on 7 August three carrier battle groups, a battleship surface action group, a marine expeditionary force, and

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various U.S. Army and U.S. Air Force units began deploying into the region. This was the operational theater of the U.S. Central Command, headed by Army General Norman H. Schwarzkopf Jr. The Air Force Military Airlift Command carried most American soldiers, marines, airmen, and coast guardsmen to Saudi Arabia. Sailors deployed to the region in their ships. The Navy's Military Sealift Command transported almost everything else needed by the American armed forces to fight a war half way around the globe. This included their tanks, armored fighting vehicles, artillery pieces, fuel, ammunition, supplies, and a mountain of other essential material.

Protecting the planes and ships that began streaming from U.S. airfields and ports across the Atlantic and Pacific, through the Mediterranean Sea and Indian Ocean, and into the theater were the warships of the U.S. Navy and its allies. For political reasons, some countries like Germany could not take part in the Persian Gulf effort. But, German naval vessels operating in the Eastern Mediterranean in keeping with their NATO responsibilities helped guard the Military Sealift Command's unarmed merchantmen as they steamed along the coasts of Libya and other potentially hostile nations. As U.S. and allied ground and air forces grew in strength on the Arabian Peninsula during August, naval forces put up a strong shield to protect the country's airfields and three critical gulf ports; al Jubayl and ad Dammam in Saudi Arabia and Mina Sulman in Bahrain. An attack on these ports by Saddam's 700-plane air force, 165-vessel navy, or saboteurs could have been devastating to the allied buildup. On hand to counter air or surface vessel threats were cruisers equipped with the advanced Aegis battle management system, and carriers, battleships, destroyers, frigates, and other combatants operating a lethal array of aircraft, missiles, and guns. SEALs and Coast Guard and Navy port security/harbor defense units guarded the ports. By 1 September, the naval contingent in the region was formidable and included 3 U.S. carriers, 1 battleship, 6 cruisers, 5 destroyers, and 8 frigates, and numerous warships from other coalition navies. Other important units, including Seabee construction battalions and hospital ships USNS *Mercy* (TAH-19) and USNS *Comfort* (TAH-20), staffed by Naval Reserve doctors, nurses, and other medical support personnel, had arrived in the region or were en-route.

One of the first ground combat formations to reach Saudi Arabia was the 7th Marine Expeditionary Brigade (MEB). The unit's equipment and supplies were delivered by the ships of Maritime Prepositioning Squadron 2, anchored year-round at Diego Garcia in the Indian Ocean for just such a contingency in the Persian Gulf. The arrival of another MEB enabled the formation of I Marine Expeditionary Force, under Marine Lieutenant General Walter Boomer. These marines and the soldiers of the Army's 82nd Airborne Division soon stood ready to defend Saudi Arabia. To provide these troops with armored muscle, eight special Fast Sealift Ships of the Military Sealift Command were dispatched from the United States with hundreds of Abrams main battle tanks and Bradley armored fighting vehicles on board. By early November 1990, the 173 ships involved in the sealift operation and the transport planes of the Military Airlift Command had deployed such strong forces to Saudi Arabia that fears for the defense of the country largely evaporated.

While taking full advantage of the sea, naval forces of the UN coalition denied the Iraqis access to it. In August, the United Nations Security Council adopted resolutions that authorized coalition naval vessels to embargo Iraqi overseas trade, with armed force if necessary. The resolutions' advocates hoped that the embargo would induce Saddam to withdraw his forces from Kuwait but at the least prevent him from importing tanks, guns, and planes. On 17 August, a Maritime Interception Force, established under Vice Admiral Henry H. Mauz Jr., Commander U.S. Naval Forces, Central Command, began operating in the waters around Saudi Arabia. Eventually, warships from Argentina, Australia, Belgium, Canada, Denmark, France, Greece, Italy, Netherlands, Norway, Spain, and the

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United Kingdom joined the effort. American P-3 Orion, British Nimrod, and French Atlantique patrol planes also took part in the operation. With the greatest resources in the area, the U.S. Navy was recognized as "first among equals" and in that capacity coordinated periodic meetings to decide on matters such as patrol sectors and search procedures.

Normally, the patrol planes would spot a merchantman and direct coalition surface units to her. Once contact was made, the commanding officer of a warship would communicate with the master of the merchant vessel by radio and gather information about her identity, point of origin, destination, and cargo. Boarding parties that routinely included American sailors and coastguardsmen, the latter members of Law Enforcement Detachments (LEDETS), were dispatched to suspicious ships to investigate their manifests and cargo. Those ships found carrying prohibited cargo were ordered to the ports of the coalition's Arab members for impoundment.

If a master refused to stop for inspection, the allies used helicopters to drop armed teams onto the ship. These men then secured the bridge and took control of the vessel. An example of one such operation was on 28 October 1990, when the master of the Iraqi oil tanker *Amuriyah* would not speak by radio to the on-scene naval commander or stop his vessel for inspection. Even though an F-14 Tomcat and an F/A-18 Hornet from *Independence* made low passes over the ship and USS *Reasoner* (FFG-1063) and Australian guided missile frigate *Darwin* fired warning shots across her bow, the vessel's master still refused to heave to. Eventually, helicopters lowered U.S. Marines onto the ship and with the reinforcement of Navy SEALs, coastguardsmen, and British and American sailors the allies took control. Saddam must have been testing the coalition's resolve, for the ship carried no prohibited cargo. She was allowed to proceed.

The embargo patrol did not force the Iraqis to quit Kuwait, but it did prevent Saddam from acquiring more arms, ammunition, and spare parts or sell oil to finance his war effort. The operation also strengthened the international coalition, because it showed the governments and peoples of many countries that UN military measures could be executed without heavy casualties or indiscriminate use of force.

This consensus was valuable in the fall of 1990, when President Bush decided to launch a campaign to oust the Iraqi army from Kuwait and restore the country to its people. General Schwarzkopf developed a four-phase air, land, and sea campaign plan that would require the deployment to the theater of 200,000 more American service men and women. Additional units included three additional carrier battle groups, another battleship, a Marine expeditionary force, a Marine expeditionary brigade, over 400 Air Force planes, and the Army's VII Corps.

As these new forces headed for the Persian Gulf, Vice Admiral Stanley R. Arthur replaced Vice Admiral Mauz and took additional measures to prepare U.S. naval forces for war. He established Battle Force Zulu in the Persian Gulf and Battle Force Yankee in the Red Sea. Carrier air squadrons practiced operating with Air Force units, the amphibious components carried out landing exercises, and the fleet's battleships, destroyers, and frigates prepared for naval gunfire support and antiaircraft operations.

In the early morning hours of 17 January 1991, the UN coalition launched Operation Desert Storm. Tomahawk land attack missiles fired by ships in the Red Sea and the Persian Gulf (and later by a submarine in the Eastern Mediterranean) began hitting targets throughout Baghdad, the capital of Iraq. That day or soon afterward, attack, fighter, electronic countermeasures, and other aircraft from

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carriers USS *John F. Kennedy* (CV-67), USS *Saratoga* (CV-60), USS *America* (CV-66), USS *Ranger* (CV-61), USS *Midway* (CV-41), and USS *Theodore Roosevelt* (CVN-71) struck other enemy sites in Iraq. In the next few weeks Navy cruise missiles and the bombs and missiles of Navy, Air Force, and coalition aircraft destroyed leadership and communications sites, air defense radars, military depots, airfields, bridges, naval bases, and facilities connected with nuclear, biological, or chemical weapons throughout Iraq and Kuwait.

Simultaneously, allied fighters established air superiority, shooting down almost all of the Iraqi MiGs and Mirages that rose into the sky to challenge them. The Navy's two kills occurred on the first day of the war when Lieutenant Commander Mark I. Fox and Lieutenant Nick Mongillo, flying F/A-18 Hornets from the Red Sea-based carrier USS *Saratoga*, each destroyed a MiG-21 with Sidewinder and Sparrow air-to-air missiles.

Even as coalition air forces concentrated on the destruction of enemy resources in Iraq and establishment of air superiority in the theater, they began a campaign to weaken Saddam's field army in Kuwait. The latter campaign reached a crescendo in mid-February as Navy carrier planes, shore-based Marine aircraft, and other coalition units eliminated tanks, artillery pieces, armored personnel carriers, surface-to-air missile sites, headquarters, and fortified positions facing the coalition's combat divisions in northern Saudi Arabia. Schwarzkopf was determined not to start the ground campaign until the enemy army had been badly hurt and its soldiers demoralized. He especially wanted to reduce the effectiveness of the multi-division Republican Guard Forces Command, Saddam's elite corps and the mainstay of his regime. During Desert Storm, Navy and Marine Corps aviation squadrons operated 600 aircraft, roughly a third of the overall coalition air force, and executed approximately one third of the combat sorties. The Navy lost six air crewmen and six aircraft in the Persian Gulf War. Their contribution and that of their fellow sailors on, over, and under the sea was vital to allied success.

In addition to taking part in the air campaign, the Navy was also responsible for eliminating enemy naval forces in the northern Persian Gulf and convincing Saddam that the coalition intended to execute a major amphibious assault on the coast of Kuwait or Iraq. As this was underway, the Army's powerful VII Corps and XVIII Airborne Corps prepared for a massive, surprise attack on the enemy's desert flank.

Soon after the start of Desert Storm, U.S. and British naval forces launched an effort to neutralize the Iraqi navy, especially its thirteen fast craft armed with antiship missiles, and eliminate oil platforms occupied by enemy troops. U.S. Navy SH-60B LAMPS III, Royal Navy Lynx, and U.S. Army OH-58D Kiowa Warrior armed helicopters operating from the decks of allied surface ships coordinated with Navy SEALs, U.S. and Canadian fixed-wing aircraft, and American, British, and Kuwaiti warships in the sea control operation.

Two days after the start of the air campaign, Commander Dennis G. Morral, the Commanding Officer of the guided missile frigate USS *Nicholas* (FFG-47), led his ship and the Kuwaiti guided missile patrol boats *Istiqlal* and *al-Sanbouk* into the northern gulf near the platforms of the ad-Dorra oilfield. On board the flotilla were SEALs, a Coast Guard Law Enforcement Detachment, two LAMPS helicopters, and a pair of OH-58D helicopters. The Army helicopters discovered the presence on the platforms of Iraqi radars, guns, and armed troops. The Kuwaitis also reported seeing tracer fire come from the site. Morral's group retired from the scene to assess the information but returned the following evening to take out the enemy forces. The Army helicopters, equipped with quiet engines, night vision devices, and Hellfire laser guided missiles, glided unseen toward two

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occupied platforms. When the Kiowa Warriors were in range, Morral gave them order to open fire. Then *Nicholas* and *Istiqal* moved close and opened up on seven other enemy positions with their guns and rockets. The devastating surprise attack killed five Iraqi soldiers and quickly convinced the survivors to surrender. That night and the next day the allied naval force collected enemy weapons and 23 Iraqis, Desert Storm's first enemy prisoners of war. In later weeks, coalition naval units, including U.S. Marine forces, liberated Kuwaiti islands that had been occupied by the enemy.

Coalition air forces also neutralized the Iraqi navy. One noteworthy action occurred on the night of 29 January, when a pair of USS *Ranger* A-6 Intruders flying near Bubiyan Island discovered an enemy presence below them. Commander Richard Cassara, a bombardier/navigator in one of the attack jets, notified the pilot, Commander Richard Noble, that he had picked up a big blip on his radar. On closer inspection, the blip turned into four naval vessels proceeding with lights out from Iraqi to Iranian waters at 15 to 18 knots. Once the aviators confirmed the identity of the contacts as Iraqi missile boats and received permission to open fire, they and the other Intruder launched 500-pound laser guided bombs that stopped three of the boats dead in the water and set them afire. A Canadian CF-18 joined the American planes and then strafed the fourth boat, which managed to limp to safety in Iran. This attack was the opening salvo of what became known as the "Bubiyan Turkey Shoot," in which UN naval air forces destroyed or severely damaged numerous other Iraqi combatants and ended the surface threat.

Free from this worry, Admiral Arthur deployed the *Midway*, *Ranger*, *Theodore Roosevelt*, and *America* (redeployed from the Red Sea) carrier battle groups further north in the gulf and nearer to Kuwait. Battleships USS *Missouri* (BB-63) and USS *Wisconsin* (BB-64), a 31-ship amphibious task force carrying two Marine expeditionary brigades and a smaller unit, and a flotilla of U.S. and allied mine countermeasures ships also closed with the enemy-held coast.

These mine countermeasures ship were critical to the success of the naval operation, because the Iraqis had established a minefield with almost 1,300 magnetic, acoustic, and other mines. The ships (and ship-based mine countermeasures helicopters) cleared lanes through what they believed were the minefields. USS *Tripoli* (LPH-10) and USS *Princeton* (CG-59), however, while operating nearby, struck mines. No crewmen were killed but damage was massive. These ships would have gone to the bottom if not for their sturdy construction and the professional skill of the damage control parties and their determination not to lose the ships.

Despite the danger, coalition naval forces pressed on toward Kuwait. The two battleships shelled targets on the mainland and on the large island of Faylaka to soften up the enemy's defenses. Another important goal was to help persuade Saddam that the accompanying amphibious task force was about to assault his army from the sea.

For that same reason, after dark on the evening of 23 February 1991, four fast boats carrying SEALs from Task Force Mike of Captain Ray Smith's Naval Special Warfare Group 1 deployed to a point off the coast of Iraqi-occupied Kuwait. Lieutenant Thomas Dietz and fourteen of his men pushed and pulled three Zodiac rubber assault craft overboard and filled them with explosives and floating marker buoys. The group then silently pulled the craft to within 500 yards of the shore. At that point, six SEALs swam toward the beach, precisely placed the buoys as they had been trained to do for amphibious assaults, and set the charges for the explosive packages. When the entire party was safely recovered on board the speedboats, all waited for the appointed hour. Exactly at 0100, on 24 February 1991, the charges exploded and the SEALs opened up with machine guns and grenade

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launchers against Iraqi positions ashore. Soon afterward, air strikes called in by the naval commandos hit the enemy defenders. Even as the special warfare warriors retired from the area, satisfied with their night's work, other allied forces prepared to launch the long-awaited ground offensive into Kuwait.

Early on 24 February 1991, coalition ground forces, including the 1st and 2d Marine Divisions of General Boomer's I Marine Expeditionary Force, smashed into the Iraqi army in Kuwait and southern Iraq. That day, the battleships increased the volume of their fire and Marine ship-based helicopters flew directly toward the coast; each of these actions designed to focus enemy eyes on the sea. To counter the expected "landing," the Iraqis fired two Silkworm missiles at USS *Missouri*; one fell harmlessly into the sea and the other was destroyed by two surface-to-air missiles fired by British destroyer HMS *Gloucester*. Meanwhile, the seven enemy divisions positioned on the coast aimed their artillery out to sea and braced themselves for the U.S. Marine assault. It never came.

By the early hours of 28 February 1991, when the allies declared a cease-fire, General Schwarzkopf's 500,000-man armored/infantry force had destroyed the Iraqi army on the Saudi Arabia-Kuwait border, liberated Kuwait City, and soundly defeated Saddam's vaunted Republican Guard armored divisions. The United States and the other nations of the UN coalition had accomplished the mission of restoring Kuwait to its rightful government. By maintaining a powerful presence in the region, continuing the seagoing embargo operation, and flying combat air patrols over Iraq in the years after the Gulf War, the U.S. Navy helped discourage the Iraqi dictator from launching other attacks on his neighbors.

The U.S. Navy was vital to the accomplishment of American objectives in the Persian Gulf War, as it had been throughout the long and often bloody Cold War. Millions of Navy men and women braved the hazards of raging seas and tempestuous skies and endured years of service far from home and loved ones to serve their country in a time of real peril. Thousands of sailors paid with their lives to ensure that powerful adversaries dared not attack the United States; that other peoples and nations around the globe would have a chance to survive the onslaught of an ideology that respected neither life nor the most basic human rights; and that the world would be a better place for future generations of Americans.

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Suggested Reading

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