

and storage space for Navy Radio San Diego. In 1947 the Secretary of the Navy established Naval Communications Station, Eleventh Naval District, as a separate activity under a commanding officer. In 1953 it completed the transformation that exists today by establishing Naval Communication Station, San Diego, as a completely separate command.

Major technological improvements continued in the sixties and seventies. In 1965 a Wallenweber—"dinosaur cage"—antenna and associated equipment and buildings were installed at the receiver site at Imperial Beach. In 1966 the station became part of a world-wide Automatic Digital Network (AUTODIN) of computers capable of secure, virtually error-free (i.e., sailor proof) message transmission at extremely high speeds. In the mid-seventies, NAVCOMSTA, San Diego, installed its first Local Digital Message Exchange (LDMX), updated its computers, and replaced obsolete copiers. Toward the end of the decade it installed the Message Reproduction and Distribution System (MRDS), which completed the automated loop and produced a communications system that is capable of providing almost "hands-off" message service to subscribers in the area. In 1980 the Remote Information Exchange Terminal (RIXT), which provided the latest state of the art in optical scanning, video display control, automatic logging, and high speed transmission and reception became operational.

Today NAVCOMSTA, San Diego, is providing rapid, secure, and reliable communication service to the fleet, and the Navy intends to keep it that way by remaining abreast of developments in technology and making additional changes to meet the overall naval communications goal of reducing manpower-intensive operations and further improving service.

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ROLAND A. BOWLING

#### San Diego, Calif., Submarine Base, 23 October 1963—

Located on most of what was historical Fort Rosecrans at Ballast Point on Point Loma, the NAVSUBASE, SAN DIEGO, has become a major submarine support facility in the Pacific Fleet. It occupies some of the most historic grounds in California, if not the United States. It was in 1542 that Juan Rodriguez Cabrillo landed on Point Loma and discovered what is now San Diego Bay, which he first named San Miguel Bay. In 1799 the Spaniards completed Fort Guijarros on what is now Ballast Point. Both the Spanish and American names stemmed from the cobblestones that covered the point. Yankee trading vessels from Boston used these cobblestones for ballast in their return voyages around Cape Horn to the East Coast—thus the name "Ballast Point." Many of these stones were used along Boston's waterfront to pave streets, some of which are still in use.

As part of the Treaty of Guadalupe Hidalgo in 1848, Upper California, which included Point Loma, became a part of the United States. On 26 February 1852

President Millard Fillmore signed an Executive Order that set aside the southern three miles of Point Loma as a military reservation. In 1897 the California legislature ceded to the federal government all lands that were being used for military purposes. The Ballast Point area fell within this category and has been under continuous military control ever since.

The Army established Fort Rosecrans in 1899 in the area presently occupied by the NAVSUBASE. However, by 1957 the need for coast defense artillery had become obsolete; therefore, the Department of the Army declared Fort Rosecrans excess property. On 2 July 1959 it was transferred to the Department of the Navy after nearly a century of Army control. The Navy in turn authorized the construction of two submarine berthing piers at the site. On 23 October 1963 the Secretary of the Navy directed establishment of the U.S. Navy Submarine Support Facility at Ballast Point under the military command of the Commander, Submarine Force, U.S. Pacific Fleet, and the management control of the Chief of Naval Operations. Finally, on 1 October 1981 the designation was changed to Naval Submarine Base, San Diego.

The NAVSUBASE, San Diego, provides base support for all submarines on the West Coast except strategic ballistic missile types, which are based in the Seattle area. Over 6,000 officers and men are actually stationed or homeported at the base, which provides direct support to over twenty submarines, more than half nuclear-powered; two submarine tenders; submarine rescue vessels, including deep submergence rescue vehicles (DSRV); the deep submergence bathyscaph *Trieste II* and other deep submergence vehicles; a small floating dry dock (ARD); and an array of sophisticated training simulators. A larger floating dry dock (ARDM-4) capable of accommodating vessels up to the size of the *Los Angeles*-class attack submarines (6900 tons) became operational in 1984.

It also supports several major staffs including that of the Commander Submarine Force, U.S. Pacific Fleet, Representative, West Coast; Commander Submarine Squadron Three; Commander Submarine Squadron Five; and Commander Submarine Development Group One. The deep submergence rescue vehicles physically located at NAS North Island for rapid deployment by air are the specific responsibility of the latter command.

Today NAVSUBASE, San Diego, represents a major shift in submarine support in the area. In the not too distant past, submarines had no base facilities and nested alongside their tenders out in the stream; now a full-fledged base supports the latest in logistics, training, and personnel to meet the special requirements of the "Silent Service."

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ROLAND A. BOWLING

#### San Diego, Calif., Miramar Naval Air Station, 1 July 1946—

Located between coastal mountains and desert to the east, the Pacific Ocean to the west, and thirteen miles north of San Diego, NAS Miramar is home for

all Pacific fleet fighter, airborne early warning, and reconnaissance squadrons, and several senior commands. The present site originally was a ranch named Miramar consisting of 2,130 acres of land purchased in 1890 by Edward W. Scripps, a San Diego pioneer.

In World War I the U.S. government purchased the ranch and established Camp Kearny, an Army Infantry Training Center. In addition, the site was used for a variety of other military functions, including as a base for lighter-than-air blimps and as an aircraft target bombing range. With the outbreak of World War II the southern half of the site was commissioned as an auxiliary air station to Naval Air Station, North Island (q.v.), and the northern half was designated Marine Corps Air Depot, Miramar.

On 1 May 1946 the two activities were combined and designated Marine Corps Air Station, Miramar, with the mission to maintain and operate a base for Naval and Marine Corps aircraft and aviation units of the fleet. However, in June 1947 all Marine Corps aviation units were relocated to the Marine Corps Air Station, El Toro (q.v.). In 1949 Congress appropriated funds to develop the site as a Master Naval Jet Air Station; and on 1 April 1952 it was designated Naval Air Station, Miramar.

In 1961 in accordance with a new concept, NAS Miramar became a support base for fighter squadrons only, the beginning of "Fightertown," which today boasts twenty-three fighter squadrons, four attack carrier air wings, a light photographic squadron, and a fleet composite squadron. In 1965 the Chief of Naval Operations designated Commander Fleet Air, Miramar, as the senior command on board the station. Reorganized in July 1973 to reflect the inclusion of airborne early warning (AEW) squadrons, this command became Commander Fighter Airborne Early Warning Wing, U.S. Pacific Fleet (COMFITAEWINGPAC) and NAS Miramar became the home base for all Pacific Fleet fighter and airborne early warning squadrons.

NAS Miramar, now comprising just under 24,000 acres with a total estimated value for land and facilities of \$4 billion, is more than ten times its original size of 2,130 acres. Northbound Interstate Highway 163 roughly bisects the facility into east and west halves. The station proper is located in the western half while the largely undeveloped eastern half provides a buffer zone for the aircraft approach corridor to the runways in the western half. Prevailing westerly winds, its location high on a mesa far enough inland to avoid much of the coastal fog, and the otherwise generally fine flying weather make NAS Miramar an almost ideal air facility for training year round, which is reflected in an annual average of 260,000 takeoffs and landings.

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ROLAND A. BOWLING

#### San Diego, Calif., Coronado, Calif., Naval Amphibious Base, 12 June 1943-

Located on the Silver Strand between the Pacific Ocean and San Diego Bay and about one mile south of the center of the city of Coronado, NAB is the home of the Pacific Fleet "Alligator Navy." It had its beginning in World War II when the Chief of Naval Operations authorized establishment of a Landing Craft Detachment at the Destroyer Base across the bay. By 1943 the burgeoning demands for amphibious warfare training to support the island-hopping strategy in the Pacific dictated an expansion of this facility greater than possible within the confines of the Destroyer Base. Accordingly, the Secretary of the Navy established the Amphibious Training Base at Coronado on 12 June 1943.

Land for the new base came from several sources. The city of Coronado leased to the Navy for \$1 a year half an acre of beach and 134 acres of landfill on the bay side. The state of California provided, at no fee, all of the beach on the ocean side that was under the control of the California State Park Commission. The J.D. and A.B. Spreckles & Company leased for \$1 a year 13 acres of beach on the ocean side, and the San Diego and Arizona Eastern Railroad Company leased for \$87.50 a year a piece of their right-of-way for building a base loading platform. This lack of outright deeding of the land caused some growth and development problems after the war. But in November 1955 the federal government finally obtained clear title or long-term right to the land. For a total of about \$1.5 million, the government obtained control of 745 acres in fee simple and an additional 257 acres on a thirty-year lease.

The original land consisted of tidelands, natural ocean beaches, and hydraulic-fill. Within six months the Eleventh Naval District Public Works Department dredged the bottom of San Diego Bay to create more fill area jutting into the bay side from the Silver Strand for the base proper and made other improvements along both the bay and ocean sides of the Silver Strand to facilitate training. The resultant base provided variable beach conditions from the quiet waters of the bay on one side of the Silver Strand to the rough waters of the Pacific on the other side. In addition, the base proper jutted into San Diego Bay where the assortment of smaller landing craft could be berthed in quiet water, while the bay itself provided deep water anchorages for the larger types. And finally, uninhabited San Clemente Island off the coast provided ideal practice landing beaches and target ranges for naval gunfire and air support training under realistic simulated combat conditions.

On 12 January 1944 the original amphibious training unit in the area, by then the Landing Craft Control School, moved on board from the Destroyer Base. Three days later the Navy formally commissioned the Amphibious Training Base, Coronado. For the remainder of World War II, it continued to make a major contribution to the victory at sea in the Pacific.

After the war, recognizing the broader than training alone aspects of amphibious warfare, the Secretary of the Navy redesignated the Amphibious Training