Naval Ocean
Systems Center
San Diego, CA 92152-5000

A SHORT HISTORY OF NOSC ON POINT LOMA

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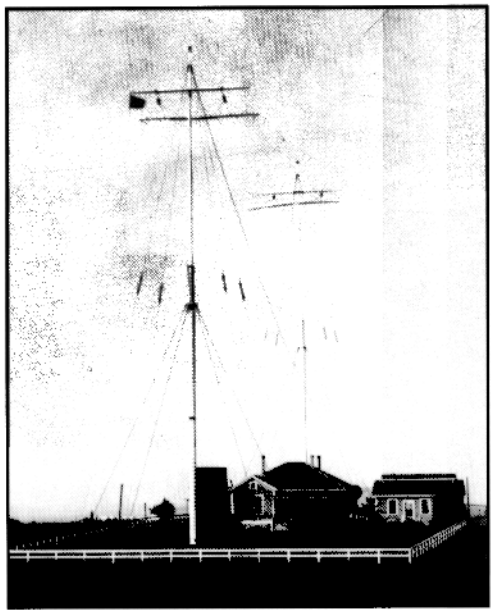
Beginnings in Point Loma

Although the two main predecessors of the Naval Ocean Systems Center (NOSC) only existed as RDT&E centers since World War II, a tradition of Navy activity on Point Loma actually began with the commissioning in 1906 of the Navy Radio Station, Point Loma. More importantly, this location later was chosen by the Navy in 1940 to be the site of its first west coast laboratory, the U.S. Navy Radio and Sound Laboratory (NRSL). (Thus, 1990 marks NOSC's official 50th year.)

The initial work of the new laboratory was to test new radar equipment in the secure and interference-free location provided by Point Loma. During the war, the work of the Radio and Sound Laboratory extended to other aspects of radar and radio communications, notably electronic architecture.



Buildings and radio masts of Navy Radio Station, Point Loma, 1907.

University of California to NEL

Beginning in 1941, civilian scientists worked at the laboratory under the University of California Division of War Research (UCDWR). Work focused on antisubmarine warfare, training systems for sonar operators, support of U.S. submarine operations, and basic research on underwater acoustics and oceanography. UCDWR and NRSL activities were combined in 1945 into a single organization, the Navy Electronics Laboratory (NEL). During the next 30 years NEL developed a Navy-wide reputation for its work in radio, tactical warfare simulators, information display and data management systems, sonar, lasers, navigation, satellite communication, and radar.

Along with their fundamental supporting research in radio physics, oceanography, and electronic materials, NEL scientists developed techniques and instruments that enabled submariners to navigate under the Arctic ice. As a result of this work, NEL scientists were aboard the USS *Nautilus* (SSN 571) during its historic 1958 transit under the North Pole and aboard USS *Skate* (SSN 578), when it surfaced at the North Pole in 1959.

Decommissioning ceremony of Navy Radio Station, 1949.

Cal Tech Roots

Concurrently with NEL development, scientists from Pasadena's California Institute of Technology (Cal Tech) conducted water-entry research under contract to the Navy to improve air-dropped torpedo performance. To test water entry of the torpedoes, the Cal Tech scientists constructed unique test facilities at Morris Dam, a reservoir east of Pasadena.

After the war, some of the Cal Tech group formed the new Naval Ordnance Test Station (NOTS) at China Lake, CA. Another group of Cal Tech scientists, those working in underwater ordnance, stayed in Pasadena to form an annex of the Underwater Ordnance Department of NOTS. Over the next 20 years, NOTS underwater ordnance researchers led development of antisubmarine rockets, lightweight torpedoes, and ASW fire control systems. In addition, NOTS Pasadena demonstrated the feasibility of launching Polaris missiles from underwater and developed the Navy's first remotely operated vehicle, the Cable-controlled Underwater Recovery Vehicle (CURV), which in 1966 recovered an H-bomb lost in the Mediterranean.

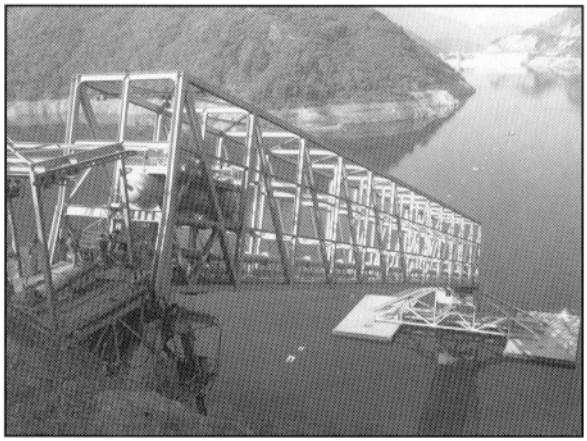
West Coast Reorganization

In 1967, the Navy reorganized its west coast laboratories. NEL became the Naval Electronics Laboratory Center (NELC)*, with a new focus on command and control, communications, and electronic materials. NEL's ASW researchers joined the Underwater Ordnance Department of NOTS Pasadena to form the Naval Undersea Center (NUC)**, newly headquartered in San Diego. NUC's mission encompassed work in areas such as underwater ordnance and fire control, marine biosciences, remotely operated vehicles, ASW, and oceanography.

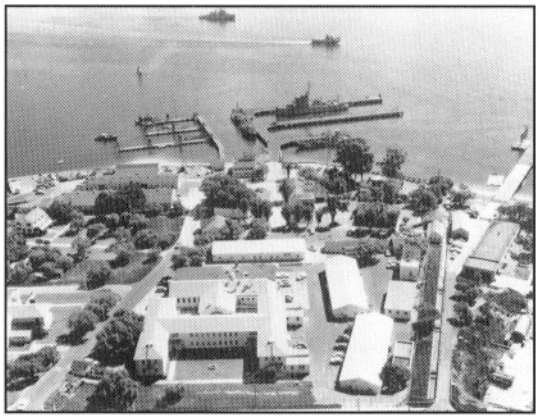
*First called the Navy Command Control and Communications Laboratory Center from 1967 to 1968.

**Called the Naval Undersea Warfare Center from 1967 to 1969; then the Naval Undersea R&D Center from 1969 to 1972.

Camouflaged Headquarters buildings for Navy Electronics Laboratory, Point Loma, 1946.



Variable-angle launcher at Morris Dam.

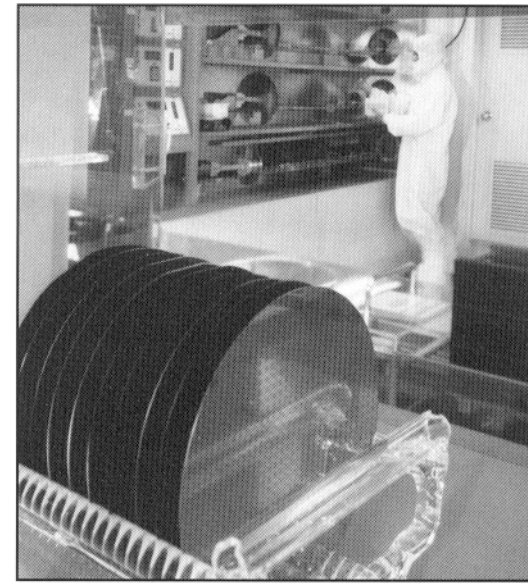


Waterfront area of NEL, 1958.

Broad-Spectrum Capability at NOSC

In 1977, NELC and NUC were consolidated as the Naval Ocean Systems Center to provide a broader systems capability and to ease integration of major mission areas. Since that time, NOSC has achieved notable successes throughout its mission areas.

Some of NOSC's successes have involved programs in command and control, satellite communications, ocean surveillance, advanced lightweight torpedoes, ASW combat control, realtime simulation of warfare systems operations, submarine countermeasures, remotely operated minesweeping vehicles, microelectronics, varied aspects of arctic research, and state-of-the-art breakthroughs in disciplines as varied as environmental research and fiber optics.



Microelectronics Laboratory.

Ice Camp Crystal, built on Arctic Ocean to support Navy's arctic research program.

Test firing of vertical launch antisubmarine rocket.

Early Land Ownership on Point Loma

The full record of land transactions on Point Loma is complex and lengthy. Point Loma has been claimed successively by the Spanish crown, the Empire of Mexico, the Mexican Republic, and the United States of America. The abbreviated chronology below lists some of the events which led to Point Loma's present land ownership.

1542	Cabrillo claims Alta (Upper) California for Spain
1796	Spanish fortification, El Fuerte de Guijarros, dedicated on Ballast Point
1821	Empire of Mexico proclaimed; California becomes province of Empire
1823	Republic of Mexico overthrows Mexican Empire; California becomes territory under new Mexican constitution
1846	Sailors and marines from sloop-of-war USS *Cyane* occupy San Diego in the name of the United States
1847	Gen. Stephen Watts Kearny, recognizing the strategic value of Point Loma, orders military reconnaissance of peninsula
1848	Treaty of Guadalupe Hidalgo ends war between U.S. and Mexico, bringing California under American flag
1850	California admitted to the Union; Point Loma becomes part of 31st state
1852	Original Point Loma land reserved for military
1855	Old Point Loma Lighthouse, on grounds now within Cabrillo National Monument, put into service
1870	U.S. Army takes control of Point Loma Military Reservation, evicting shore whalers from Ballast Point
1873	U.S. Army builds fortifications on Ballast Point
1890	Ballast Point Lighthouse established
1891	New Point Loma Lighthouse at south tip of peninsula replaces original lighthouse
1892	U.S. Quarantine Station established on land now occupied by NOSC
1898	First coast artillery detachment from San Diego Barracks occupies new Ballast Point Battery
1899	Ballast Point Battery and contiguous area of Point Loma Military Reservation named Fort Rosecrans

Land Ownership on Point Loma since 1900

1901	La Playa Coaling Station established; first Navy shore facility in San Diego; later (about 1930) called Navy Fuel Depot and evolved into present Naval Supply Center, Fuel Division
1906	Navy Radio Station Point Loma, call letters NPL, established near site of present NOSC headquarters
1933	Cabrillo National Monument turned over to National Park Service
1934	War Department allots land for Fort Rosecrans National Cemetery
1940	U.S. Navy Radio and Sound Laboratory (NRSL) established on site of Navy Radio Station Point Loma
1941	University of California Division of War Research (UCDWR) established for ASW studies
1942	Navy acquires land for expansion of NRSL and for Naval Training School, now Fleet Combat Training Center, Pacific (FCTCP)
1944	Navy acquires land for Combat Information Center (CIC) School, now part of FCTCP; Navy Degaussing Station established near Ballast Point
1945	NRSL becomes U.S. Navy Electronics Lab (NEL)
1946	Marine Physical Laboratory (MPL) established as peacetime successor to UCDWR
1949	Quarantine Station property transferred from Public Health Service to NEL; Navy Radio Station Point Loma decommissioned
1956	Navy acquires additional Quarantine Station land for Nimitz Ship Operating Facility (now part of MPL)
1959	Fort Rosecrans discontinued as an Army post
1962	Navy conveys title of 37.6 acres of NEL land to City of San Diego for Metropolitan Sewage Treatment Plant
1963	Navy Submarine Support Facility (SUBSUPFAC) established at Ballast Point (becomes Naval Submarine Base in 1981)
1967	NEL is renamed Naval Electronics Laboratory Center (NELC), with NEL's underwater R&D activity transferred to newly established Naval Undersea Warfare Center (NUWC), later renamed Naval Undersea Center (NUC)
1968	NUC headquarters moves from Pasadena to San Diego
1975	NUC Pasadena closes
1977	NELC and NUC consolidate to form Naval Ocean Systems Center (NOSC)

Aerial view of Point Loma, looking south, 1990.

Reviewed and approved by

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March 1990
NOSC TD 1758

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