POINT LOMA
FIRST LIGHTHOUSE

1869

365. *Point Loma, Cal.*—Small repairs are needed, and will be attended to this year at this station, on the cistern, gutters, and roof of kitchen. With the exception of these small needs the station is in good order and condition, and the light well kept.

1875

433. *Point Loma, entrance to San Diego Bay, sea-coast of California.*—Some slight repairs and renovations have been made at this station during the past year; but as the keeper's dwelling is in bad condition, considerable repairs are necessary. It is also proposed to fit up two rooms in a portion of the wood-house for the better accommodation of the keepers. These repairs and changes will be made during September, as that is deemed the best time for doing the work.

1876

433. *Point Loma, entrance to San Diego Bay, sea-coast of California.*—The dwelling has been repaired, a portion of the wood-shed converted into a dwelling for the assistant keeper, and a barn built. The station is now in good condition.

1878

448. *Point Loma, entrance to San Diego Bay, sea-coast of California.*—The assistant keeper's quarters, a room in the wood and oil storehouse, is in bad condition. This shed, or storehouse, which was built of rough, unseasoned boarding, lined inside with cloth and paper, and had openings in the walls, was unsuited for keeper's quarters. It has been lined with tongued and grooved boards, and otherwise repaired, but it is still unfit for quarters.

1880

477. *Point Loma, on west side of entrance to San Diego Harbor, sea-coast of California.*—Extensive repairs were made to this station. The walls of the dwelling are built of soft sandstone, which disintegrates under action of the weather, and it was found necessary to cover the west side and south end walls with a heavy coating of Portland cement-mortar, after which they were painted with two coats of stone-color, rubber paint. The east side and north end walls were painted with three coats of stone-color, rubber paint. The eave-gutters were renewed, the cellar-walls were plastered inside with a heavy coating of cement-mortar, the cellar window-frames were reset in the walls, a new concrete floor was laid, new steps were built, the foundation-walls supporting the kitchen were rebuilt, and a new brick walk was laid from the front gate to the dwelling. The small inclosure surrounding the light-house structure was leveled up with clay. Slight repairs were made to the assistant keeper's dwelling and the store-house, which is under the same roof. The walls and roof of the assistant keeper's quarters and store-house, and the roof of the keeper's dwelling will be repainted, and the interior wall of the dwelling will be repaired this year. Otherwise the station is in excellent condition.

1882

495. *Point Loma, west side of entrance to San Diego Bay, California.*—This light is the highest in the United States, its focal plane being 462 feet above the sea-level. It is in consequence often obscured by high fogs, while the rest of the coast line is distinctly visible, and it is thus made of little practical value as an aid to navigation, and a new site for it has been selected lower down. When it is moved to its new location, the erection of another light of the fifth order on Ballast Point, as a local aid to the navigation of San Diego Harbor, will become necessary. Meantime, however, a small stake-light, such as are in use along the Western rivers, should be placed upon Ballast Point. The water supply of the station is inconveniently limited and can only be increased by the building of a water shed and cistern. The capacity of the latter should be 10,000 gallons, and, to supply it with the rainfall of San Diego, 6 inches, will require the shed to be 2,800 square feet. This will be built during the current year. New mineral-oil lamps were

SOURCE:
LIGHT-HOUSE
BOARD

POINT LOMA

1882 (CONT.)

fitted, and the keepers were instructed in their use. A store and boat house and boat-ways were built. The piles extending into tide-water were sheathed with copper, and a winch for hauling up the boat placed at the head of the ways, and other minor repairs were made.

1883

507. *Point Loma, on the west side of the entrance to San Diego Bay, California.*—A new water-shed and cistern were completed in December and January. It has an area of 2,900 square feet, and is in the fenced enclosure about the keeper's dwelling. The cistern is of brick, with a capacity of 11,000 gallons, and will have a Douglass pump, with a suction-pipe. The station has received various minor repairs and is now in good order. This light is the highest in the United States, its focal plane being 462 feet above the sea. It is, in consequence, often obscured by high fog, while the rest of the coast line is distinctly visible. As this makes the light of but little practical value to navigators, a new site for it has been selected lower down the cliff.

1884

517. *Point Loma, on west side of entrance to San Diego Bay, California.*—Several minor repairs were made here. As stated in the last annual report, this light is 462 feet above the sea, and is often obscured by high fog while the coast line is distinctly visible. As this makes the light of little practical value to navigation, a new site was selected lower down the cliff. The station is now in good order and condition, with some slight exceptions.

1887

614. *Point Loma, entrance to San Diego Bay, California.*—For the accommodation of the assistant keeper's family a room was fitted up in the wash-house by the keeper, for which the necessary material was furnished, as well as some few articles of hardware, locks, etc., for general repairs. The focal plane of the light in its present position is 462 feet above the sea level. It is the highest light-house in the United States, and is quite often obscured by high fogs when the coast line below is plainly visible. These facts induce the Board to recommend the lowering of the light to a less elevated site, as in its present position it is of little practical importance as an aid to navigation. It is estimated that it will cost $30,000 to build a light-house tower, oil-house, keeper's dwelling, and out-houses at the lower site selected for the purpose.

1888

637. *Point Loma, entrance to San Diego Bay, California.*—Some slight repairs were made here. The characteristic of this light is to be changed from fixed white to flashing white and red. The Board made the following statement, with reference to lowering this light, in its last annual report:

> The focal plane of the light in its present position is 462 feet above the sea level. It is the highest light-house in the United States, and is quite often obscured by high fogs when the coast line below is plainly visible. These facts induce the Board to recommend the lowering of the light to a less elevated site, as in its present position it is of little practical importance as an aid to navigation. It is estimated that it will cost $30,000 to build a light-house tower, oil-house, keeper's dwelling, and outhouses at the lower site selected for the purpose.

A bill for that purpose has been passed and steps will be taken to make this change as soon as practicable.

POINT LOMA

1889

675. *Point Loma, entrance to San Diego Bay, California.*—On April 1, 1889, the characteristics of this light were changed to fixed white, varied by red and white flashes, one minute interval between flashes. Congress made an appropriation of $30,000 for the re-establishment of this station on a lower level. The site selected is about 30 feet above sea-level and 60 feet from the bluff. Plans for the structures are under consideration.

1890

766. *Point Loma, entrance to San Diego Bay, California.*—Plans for the structures to be erected at the new site of this station having been prepared, bids for the work were opened August 21, 1889, and contracts were entered into with the lowest bidders for the buildings and for the iron tower. The contractors for the buildings commenced work immediately and pushed it vigorously to completion, although they were slightly delayed by bad weather and detentions in transportation of material, but their work was done in a good and substantial manner and is in every way satisfactory. A new barn was also built and the concrete foundation for the iron tower was prepared. The iron tower was finished and will be immediately erected as soon as received at the site, and the new lens will be put in position. The station will then be in a complete condition. It is expected that the new light can be exhibited early in the coming year.

1891

LIGHT-HOUSES.

785. *Point Loma, entrance to San Diego Bay, California.*—This new station was completed by the end of the last fiscal year, except the iron tower and the lens. The tower was received at the site on July 16, and was erected during August. The lens furnished was found to be too large for the space provided for it, therefore it was necessary to procure another, which reached the station in January, 1891, and was put in place during February. On March 23, the light was exhibited for the first time. It is of the third order, flashing red and white alternately, with twenty seconds' interval between the flashes. An electrical call-bell system was put up connecting the tower with both dwellings.

1892

823. *Point Loma, entrance to San Diego Bay, California.*—An area 80 feet square was cemented for a water shed. It was connected by a pipe line with the tanks. At the lower end of this area and on two sides of it a concrete wall was built forming a basin capable of holding 12,000 gallons of water in addition to that in the tanks.

1893

LIGHT-HOUSES.

847. *Point Loma, entrance to San Diego Bay, California.*—Fences were built and minor repairs were made.

1894

864. *Point Loma, entrance to San Diego Bay, California.*—A brick oil house was built. Repairs were made to the water tanks. The color of the iron tower was changed to white with black lantern. A topographical survey of the site was made.

POINT LOMA

1896

981. Point Loma, entrance to San Diego Bay, California.—The small frame building which was used as a storehouse for supplies landed at Ballast Point and destined for Point Loma was moved from its former position to La Playa and placed near the quarantine station, convenient to the landing place and to the road to the station. This road is in fair condition, while the road formerly used, over the hill from Ballast Point, is almost impassable and can not, with any reasonable expense, be put in order. The keeper has been authorized to move the barn from its present site to a position on the opposite side of the dwelling, so as to avoid the nuisance caused by the wind carrying the foul odors into the living apartments. The clay bank near the tower is being eroded, and this may in time undermine the tower. Measurements have been taken and will be repeated from time to time to obtain the rate of cutting so as to provide remedial measures in time to prevent serious damage. Various repairs were made.

96

1897

985. *Point Loma, entrance to San Diego Bay, California.*—The barn was moved from the windward side of the dwelling to a more suitable site. Three tanks, in which the water for the supply of this station is stored, were covered in with slight wooden structures to protect the water from evaporation by the heat of the sun. Minor repairs were made.

1899

1. Point Loma, entrance to San Diego Bay, California.—The iron door of the skeleton tower was repaired, and new fences were built across the reservation and around the cement watershed. Two small storehouses were built in the rear of the dwellings for the storage of fuel and paint. The roadway was repaired where required. Minor repairs were made.

1904

1. Point Loma, entrance to San Diego Bay, California.—About 100 feet of pipe was laid to maintain the pipe line connecting the new station with the old one on top of the hill. Various repairs were made.

1905

1. Point Loma, entrance to San Diego Bay, California.—The roadway from the station to the crest of the hill was graded and filled in where necessary, and culverts were built to carry off the water.

1906

1. Point Loma, entrance to San Diego Bay, California.—The work of connecting the water supply of this station with the distributing system of Fort Rosecrans was begun and will be completed soon.

1907

1. Point Loma, entrance to San Diego Bay, California.—An intercommunicating telephone system connecting the tower and quarters was installed. Trees to provide a wind-break and fence were planted along the boundary line of the station. The pipe line connecting the station water system with that of Fort Rosecrans was completed. Minor repairs were made.

POINT LOMA
1912

SIGNAL AND ADDITIONAL QUARTERS, POINT LOMA LIGHT STATION, CAL.

pose.—A fog signal was established at this station to enable vessels to enter Diego Bay during the fogs which occasionally prevail during the winter and months. The commerce of this harbor is rapidly increasing, a channel carrying t of water over the bar has recently been completed, and with the fog signal in tion, larger vessels are not delayed in entering or leaving port during fog. Fog placed in commission March 1, 1913.

.—The fog-signal building is located immediately behind the light tower on uthern end of Point Loma, compressed air being carried to sirens and horns in front of tower, directly on the point.

ucture.—The fog-signal building is a hollow terra cotta block structure 24 feet feet 6 inches outside, the walls inside and out cement plastered, floor concrete, covered with diagonal red asbestos shingles.

signal.—This apparatus consists of duplicate 6-inch automatic sirens blown by ressed air. The compressing plant consists of duplicate 10 by 18 inch single- compressors, direct connected to 22-horsepower gasoline engines on the same The sirens are located about 20 feet distant from the fog-signal building sup- in a metal framework.

arters.—Additional quarters for one keeper have been built. They consist of a ory and basement dwelling of hollow terra cotta block, the walls plastered cement plaster outside, and with hard wall plaster inside; the roof covered diagonal red asbestos shingles. The first floor consists of inclosed porch, hall, room, dining room, kitchen, and laundry, and the second floor has three bed- and bath.

.—The fog signal was established and quarters constructed under the act of t 24, 1912, appropriating $17,500. The total cost was $17,464.48. The work performed by hired labor, and was commenced in December, 1912, and com- d June 25, 1913.

AND

Point Loma, Cal.—The act of August 24, 1912, subsequent to the close of the year, appropriated $17,500 for establishing a fog signal and additional quart Point Loma Light Station, San Diego Harbor, Cal. Work was immediately menced and by November 15, 1912, the fog-signal apparatus had been purch plans prepared for the construction of the necessary buildings. It is expected the work will be completed by April, 1913.

The Explorer

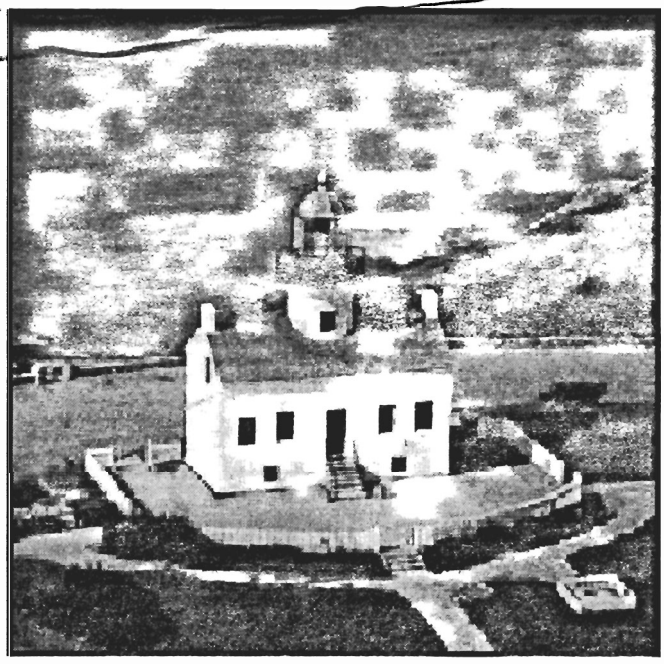


Newsletter of Cabrillo National Monument
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The Old Point Loma Lighthouse

145 years of history and a bright future

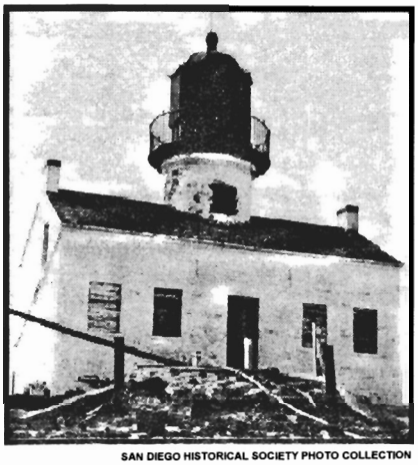


About this Issue

In 1913 a colorful group of San Diego citizens, the Order of Panama, spearheaded a movement to have a monument created to Juan Rodríguez Cabrillo. They chose a half-acre site containing the abandoned Old Point Loma Lighthouse–420 feet above the water at the tip of Point Loma. Their dream was to create a 150-foot statue that could be seen from both land and sea. As fate would have it, the statue was never built, but the lighthouse still stands as a reminder of another era; the documents that record its operation tell of the characteristics and daily life of the people who operated the facility for 36 years.

This issue of *The Explorer* will delve into the various aspects of the lighthouse that make up its history. Several of the historical articles have been reprinted from early issues of this publication. We will also look to the future to see how plans are evolving to tell the story of this old building more effectively.

Emily Troxell, Editor



SAN DIEGO HISTORICAL SOCIETY PHOTO COLLECTION

The light that failed

Reprinted from the March 1991 issue of *The Explorer.*

On March 22, 1891, the Old Point Loma Lighthouse cast its beam over the ocean and harbor entrance for the last time. The event was reported and commented upon in *The San Diego Union* on that day, sharing the pages with news of a Franco-Russian alliance, the death of Confederate General Joseph E. Johnston, and Senatorial bribery charges in Sacramento. An article on page 3, near a large advertisement touting the Hotel del Coronado as a "veritable earthly paradise," announced the closing:

The light on the head of Point Loma Promontory, which has been a beacon to mariners and a land-mark to travelers for thirty-six years will go out of service tonight. Below, on the ocean side, about 400 feet nearer sea level, the new light that is to shine under, instead of over, the fogs, will be touched into flame at tomorrow's sunset by a San Diego lady. There are small sailing parties forming that will combine this event with a moonlight picnic, the hill climb and the exhilarating descent offering attractions to the young people particularly. Some of their elders will recall the old white light that first went into the tower of the stone lighthouse in 1855, and which shown [sic] toward the big sheep pasture across the bay, where the city of San Diego now stands.... The unusual height of its light, some 485 feet from the water, this being the second highest in the world, has been found too high to do best service, as the fogs settle about it at that latitude.... Capt. Robert D. Israel has discovered that the new light and his 65th birthday anniversary are due at about the same time, as it was sundown on March 23, 1826, when he decided to try mortality, and incidentally lighthouse keeping.... The old stone house, which is to be boarded up and left until the war department shall decree to tear it away for fortifications or guns, has been visited by many thousand people from the four corners of creation. It has seen one marriage and two births, but no deaths. And from its tower visitors have feasted their eyes on what no less a traveled authority than Charles Dudley Warner declares to be one of the four great views of the world."

The article did not identify the "San Diego lady" who first lit the lamp in the new lighthouse. Further details of the closing appeared on March 26:

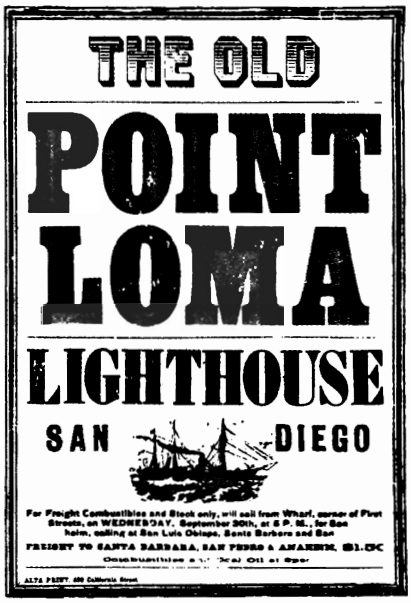
Frank Burton of San Francisco, superintendent of light house repairs, who has superintended the setting up of the new light house machinery, began on Tuesday to take down and pack the old lens and lamp for shipment to the New York headquarters. He says the old house will then be boarded up and whitewashed and left in charge of Capt. Israel. The pilots of the harbor were offered the use of the structure, but have declined it. How they will be able to learn when a vessel is outside has not yet been settled, but probably an electric bell will be put in from Pelican Point to Ballast Point. Formerly they were signaled by the lighthouse force raising a barrel to their flagstaff.

The *Union* printed a touching "obituary" of the Old Point Loma Lighthouse in an editorial on Tuesday, March 24, entitled "The Light that Failed":

One of the most familiar and romantic landmarks of the entire bay region has disappeared forever. On Sunday night the light in the tower at Point Loma which has been as a "pillar of fire at night and a cloud by day," for many, many years shone for the last time. It will be sadly missed by residents in the bay region who have regarded it with a feeling akin to reverence and have pointed it out to strangers as one of the historic and interesting features of the landscape. Many have for years watched for its first gleam at night and felt a sense of companionship in the light that never failed. It could be seen from the mountains, from the mesas, from any direction. It was a beacon and a hope to mariners and an object of veneration, almost, to the old residents of the bay region. It will shine no more forever, and to thousands its disappearance will be like the death of an old comrade. The new light below the point burned last night for the first time, and to many Point Loma will have lost half its romantic interest because of "the light that failed" at last.



It will shine no more forever, and to thousands its disappearance will be like the death of an old comrade.



The lighthouse revisited

Our historic lighthouse has been a San Diego landmark for over 145 years. This building, far above the water at the tip of Point Loma, has never been buffeted by high winds or exposed to the rigors of the high seas. Its location did insure that its beam could be seen from the sea as well as from the bay. However, during its years of service, the beacon was frequently blocked from view because of the cloudbanks shrouding the coastline. The beacon was so unreliable that after only 36 years of service a new lighthouse was built a mere hundred feet above the water at the extreme point of the peninsula. This "new" facility, along with its other buildings, is still in use today.

An important document dealing with the Old Point Loma Lighthouse is the NPS 1981 *Historic Structure Report* by F. Ross Holland, Jr., and Henry G. Law. Throughout this issue, there will be short excerpts from this document relating to some function of the lighthouse. They will give you a glimpse of life at the lighthouse around 125 years ago.

The Old Point Loma Lighthouse? Raze it!

The Curious Twist of Fate that Saved the Old Point Loma Lighthouse.

By George Herring

Tear down the Old Point Loma Lighthouse?—that's what they wanted to do.

On Friday, September 26, 1913, a large group of San Diego businessmen, one U.S. Senator, several military officers, and others, gathered in front of a derelict building near the tip of Point Loma. Known to them as the Old Spanish Lighthouse, and better known today as Old Point Loma Lighthouse, the building had been abandoned since 1891. It seemed to have no purpose, so they proposed razing the useless building and replacing it with something more useful—a 150-foot statue.

At the turn of the 19th century, after the frontier frenzy of the past half century, California was self-consciously creating a culture for itself. The roots of California, in the minds of the majority of this time, could be found in the initial "civilizing" influences of the Spanish. This idea is best exemplified by Helen Hunt Jackson's book *Ramona*. Published in 1884, it was conceived and written as a kind of mission-era *Uncle Tom's Cabin* of Indian life. The book contributed greatly to the idyllic (and inaccurate) image of California's mission period that is still prevalent today. Subsequent to this book and the Romantic era to which it belongs, stories of swallows returning to San Juan Capistrano, "El Camino Real" tourist signs along Highway 101, and images of Juan Rodríguez Cabrillo, have all become indelible aspects of the California landscape.[1]

One year after the Old Point Loma Lighthouse closed in 1891, Walter G. Smith, newspaper editor of the *Sun*, became the first to promote the idea of a celebration commemorating Cabrillo's "discovery" of San Diego Bay. Such an occasion, he believed, would help to establish San Diego as the birth place of Alta California.[2] The event that ensued on September 28, 1892, the first Cabrillo Festival, set a precedent for identifying San Diego Bay with the Cabrillo expedition.

Still seeking to draw attention to itself and its idealized Spanish past, the San Diego Chamber of Commerce met in 1909 to begin planning for an exposition to coincide with the opening of the Panama Canal. The best-known result of the Panama Exposition of 1915 that followed is the

continued on next page

romantic, almost surreal, Spanish-Colonial architecture that houses many of the museums in Balboa Park today. But, another well known site owes its existence to the planning that went into the Panama Exposition, although few realize it: Cabrillo National Monument.

Charles Collier, the champion who most vociferously promoted the Panama Exposition, organized a group known as the Order of Panama in 1911 with the chief purpose of establishing "...marks of recognition all over the city and the bay that will perpetuate the deeds of the Spanish." The Order of Panama grew into a sort of civic booster group and a fraternal order which claimed 500 members. A committee within the Order began to undertake "...the work of building a Heroic [150-foot] Statue of Juan Rodriguez Cabrillo, the discoverer of California."[3] But where to build it?

In a letter dated April 13, 1913, to the Secretary of the War Department, committee chairman Judge Ernest Riall wrote:

When Cabrillo sailed into San Diego Bay on the 28th of September, 1542, Point Loma was the first land sighted, and as the building of this Statue is a work of both National and Inter-National importance, we believe the most suitable place for it is on Point Loma; and as Point Loma, or that portion where it is proposed to erect the Statue is Government property and a Military Reservation, the first step necessary is to secure the consent of the War Department.[4]

The Army was concerned about the proposed site, which lay 300 feet south of old lighthouse, since it felt that this area might be needed for future fortifications. Thus, an alternative site was chosen by the Order of Panama: "...the site of the Old Lighthouse and...the loop made by the Boulevard around the lighthouse." But, the Army also desired that the pedestal of any statue constructed on



A heroic statue, by a great sculptor, will be erected on that noble and commanding cape, Point Loma, which is the first land that Cabrillo sighted in the State of California

Charles Lummis

Army land be built of reinforced concrete, in which there would be room for a radio-signal station, water storage, and a latrine for the radio operators and the visiting public. After some wrangling, it was decided to keep the latrines, but the radio station would be built elsewhere.[5]

As for the Old Lighthouse itself —tear it down! Between 1891 and 1913 the Old Lighthouse had become a run-down, derelict, old building deemed of little historical value since, according to major William C. Davis, Commanding Officer of Fort Rosecrans, it had been built "since the American Occupation."[6] If it wasn't of Spanish origin then it wasn't romantic enough to save. Adventurous tourists to the site had the habit of climbing the hazardous old stairs to the tower to enjoy the view and tended to use the basement as a makeshift latrine —uses the Chamber of Commerce could not point to with civic pride. As far as the Order of Panama was concerned, tearing down the lighthouse to build a spectacular 150-foot statue of Cabrillo made obvious sense.

Seeking to draw attention to the project, in anticipation of the authorization of the lighthouse site for the construction of the statue, The Order of Panama commissioned Historian Charles Lummis to write in a publicity article:

If there is any man to whom California should erect a statue...it is to Cabrillo, its Discoverer. The Order of Panama—a patriotic organization to save and honor the Romance of the Pacific—will build that Monument. A heroic statue, by a great sculptor, will be erected on that noble and commanding cape, Point Loma, which is the first land that Cabrillo sighted in the State California—the first land ever seen by a "civilized" [quotes added]man on the Pacific verge of the United Sates. A hundred and fifty feet tall from the ground, and full hundred and fifty feet above the Pacific tide, on the



If it was not of Spanish origin then it was not romantic enough to save.

sightliest point of the lion-like headland he steered from nearly three hundred sixty years ago and overlooking the best harbor he found in all his sailings, the statue of Cabrillo will stand, guardian of his greatest discovery.[7]

On October 14, 1913, invoking the authority given to him by the Antiquities Act of 1906, President Woodrow Wilson signed into existence Cabrillo National Monument with the stated purpose of building a "heroic statue of Juan Rodríguez Cabrillo."[8] In the years that ensued, efforts to build that statue gained and lost momentum, but it was never built.

By 1930 the Old Point Loma Lighthouse, despite not being of Spanish origin, had stood long enough to be considered a historic building in its own right. When the Army announced it didn't have enough appropriations to maintain the building, a call went out to the community for support. Businessman Philip Gildred answered by stating at a public event, "The old lighthouse is something we San Diegans must preserve, not only for its historic value but also because it affords the finest view of our city."[9] The old building now was perceived as having both nostalgic and economic value—it was a prime tourist attraction.

In 1933 Cabrillo National Monument was transferred to the management of the National Park Service. With such time and money as was available, the Service investigated the history of the building and refurbished its tired walls. Later, in 1949, Cabrillo National Monument came into possession of a 14-foot "heroic statue" of Juan Rodríguez Cabrillo with which to fulfill its 1913 mandate But that is a story for another day.

When they worked to establish Cabrillo National Monument, the Order of Panama intended to raze the Old Point Loma Lighthouse—a somewhat sad and ironic twist of history. Still, if the Monument had not been established in order to build a monstrous 150-foot statue, the lighthouse may well have been torn down anyway. Fortunately, then, in their effort to tear down the lighthouse, those early San Diego boosters may have actually saved it.

[1] Starr, Kevin. Americans and the California Dream. New York: Oxford University Press, 1973, 395.
[2] Lehmann, Susan Collins. An Embarrassment of Riches, The Administrative History of Cabrillo National Monument. Cabrillo Historical Association, 1987, 19.
[3] Ibid, 20-21
[4] Ernest Riall to Lindley m. Garrison, 29 April 1913, AGO 2037465, Record Group 94, national Archives, Washington, D.C. (copy on file, Cabrillo National Monument).
[5] Lehmann, Susan Collins. An Embarrassment of Riches, The Administrative History of Cabrillo National Monument. Cabrillo Historical Association, 1987, 22.
[6] Ibid.
[7] Charles Fletcher Lummis, In memory of Juan Rodriguez Cabrillo Who Gave the World California (Chula Vista, California: Danrich Press, 1913.
[8] Presidential Proclamation, No 1255, October 14, 1913 (Copy on file, Cabrillo National Monument)
[9] San Diego Union, 13 August 1930.



Cost of the lighthouse

Initially the Point Loma lighthouse, like all the other [Pacific Coast] lighthouses, was to cost $15,000.00. It wound up costing nearly $30,000.00 and was the second most expensive lighthouse of the eight. Cape Disappointment cost the most. The reasons for the difference between the contract and the actual price were several. The contractors contended that it was the duty of each lighthouse [to pay] pilotage fees and lighterage fees for hauling the construction materials from the ship to the site.

The cost of the Point Loma lighthouse was further burdened by the contractors' claim for the cost of building a road to the site. The general breakdown of the charges for the Point Loma Lighthouse is as follows:

Amount to be paid on completion of contract	$15,000.00
Deducted for illuminating apparatus	1,002.74
	$13,997.26
Allowed for extra thickness of walls	1,153.40
Transportation, construction expenses at site, etc.	13,964.60
Total	**$29,115.26**

(Holland and Law, p.36)



From the Superintendent

by Terry DiMattio

The Old Point Loma Lighthouse and its history being the focus of this issue, I am pleased to be able to tell you that the future looks bright for the lighthouse. In fact, the future looks a lot like the past, like the 1880s. In 1984, the National Park Service restored the exterior of the lighthouse. We rebuilt the tower, installed a third order, fixed Fresnel lens in the lantern, and put historically accurate wood shingles on the roof. In 1995, we refurnished the interior. We papered the walls with Victorian era wallpaper, and added many more pieces of furniture from the late 19th century. The next step—the last step—is to change the grounds around the lighthouse to look more as they did when Robert Israel was the keeper and he and his wife Maria were raising their family.

To accomplish this, the Denver Service Center, the National Park Service's design center, is preparing the construction drawings and specifications for this project. To restore the area around the lighthouse, we are proposing to:

•Remove most of the asphalt loop road and former parking area around the lighthouse. The outer rock wall that defines the historic zone will remain in place.

•Remove the asphalt walks, rock stairs and picket fence, and all the vegetation except for the Torrey pines. The interior rock wall that surrounds the lighthouse will remain in place, except for that portion at the south end, which cannot be covered with enough soil to allow native plants to grow.

•Relocate the bronze plaques—National Register of Historic Places and California Registered Historic Landmark No. 51— to the existing lighthouse wayside exhibits at the end of the walk leading from the visitor center.

•Build a 10-foot-wide, tan-colored concrete promenade walk with red brick edge inside the outer rock wall, and a 12-foot-wide asphalt road on the west side of the lighthouse. The road will provide access to the two handicap parking spaces that will be built southeast of the lighthouse, and to the Whale Overlook and the Navy antennas.

•Re-establish the historic ground contours to approximate those in the 1880s.

•Outline the location of the barn and oil shed with sandstone blocks, or rocks from the interior rock wall, and fill the areas within the outline with decomposed granite or another suitable material.

•Build a concrete rain-catchment basin in front of the lighthouse similar to the one that existed in the 1880s.

•Build walks of decomposed granite, or other suitable material, from the tan-colored promenade walk to the lighthouse.

•Build a 900-square-foot interpretive shelter southeast of the lighthouse on the footprint of the assistant keeper's quarters. The shelter would be similar in scale and appearance, and incorporate materials similar to those found in the assistant keeper's quarters. Its shape, roofline, windows, doors and siding would replicate those of the original building. Inside will be exhibits on the lighthouse lens and the history of the lighthouse itself.

•Build a universally accessible, single-commode, unisex restroom on the back of the interpretive shelter.

•Re-install the wooden flagpole and picket fence in their historic locations. Plant native vegetation outside the picket fence.

This is one of the projects in our Recreation Fee Demonstration Program. That program allows us to retain 80% of the funds we collect at the entrance station, minus the cost of collection, for projects such as this one that protect resources or improve the visitor's enjoyment of the monument.

We recently finished reviewing the draft 80% construction drawings, and sent our comments to Gary Hurelle, the team captain for this project at the Denver Service Center. Gary and his team of architects and civil and mechanical engineers should be able to complete the drawings and specifications by mid-summer. If we are given permission to use funds in the Recreation Fee Demonstration Program, we hope to begin construction this fall or winter.

When this project is complete, the Old Point Loma Lighthouse and the area around it will look a lot as it did almost 120 years ago. As you walk up the path from the visitor center, you will be transported back to the past—to the days before indoor plumbing, television, and the Internet. Welcome to the 1880s.

A Glimpse of Life at the Old Point Loma Lighthouse

by William Michels

Reprinted from the June 1991 issue of *The Explorer*. Bill Michels was a history intern at Cabrillo from SDSU.

During my internship at Cabrillo, I researched information on the old lighthouse and the buildings which made up the station. In connection with this work, I gathered some information of a "local color" nature, which may add to the record for interpretation.

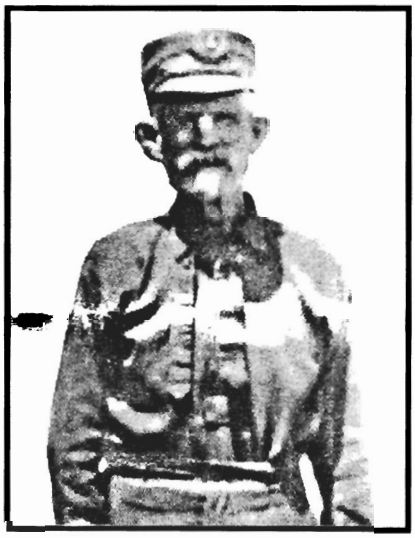
Although the station was in operation from 1855 to 1891, no one recorded where the assistant keeper was lodged until 1875 when the Light House Board Report described a woodshed which was partially converted to living quarters. This structure appears sound enough in photographs, but initially it was built of crude materials, the reports of the Light House Board commenting on the poor quality of the shelter in spite of attempts to upgrade it.

Prior to this, the small room on the east side of the second floor of the lighthouse may have served as a bunkroom. It is hard to imagine this room—convenient for storage of lamp supplies—being put to dual use, as some have speculated. The *Instructions to Light-Keepers* (1881) specified watches of twenty-four hours with shift changes at midnight Can you imagine the assistant spending his night off duty there? Or catching a nap during the daylight hours of his shift?

The scenes around the cooking area of the lighthouse can only be imagined. Eating in shifts was one possibility. To make matters worse, during the first year of operation a second assistant position was actually filled. This must have bordered on the ludicrous.

In thirty-six years of operation, twenty-one assistants are known to have come and gone; over half of them resigned or were removed. Perhaps the most satisfactory arrangement was a domestic one with the woman serving as the assistant. This occurred twice: when Eliza Jenkins (1867–1871) and María Israel (1873–1876) served. These women also tried to provide for the kitchen from gardens of tomatoes, potatoes, lettuce, and possibly carrots, beets, peas and string beans.

Included in the outbuildings was a barn or stable to house the team and wagon acquired in early 1876. By the following year, a buggy was also on the premises and may be the same one appearing in an early photograph. Before this, the only official transport was a light boat used to ply the waters of the bay to and from San Diego.



Robert Israel, the last keeper of the Old Point Loma Lighthouse

Then, as now, the Point lured visitors. The younger set used the outbuildings as a setting for social activities. One group actually formed a social club which held dances at various locations. Dick Kerren provided the violin music, sometimes accompanied by a "Mrs. Juch" whose fiddle was judged by one participant to have "the touch of a sledge hammer but a wonderful sense of rhythm." Kerren must have possessed a reckless character, for he was involved in assaults on two recorded occasions within a year.

The Israels evidently had their hands full raising three sons and, by 1880, a niece. The boys each played an instrument, so perhaps another violin, a banjo or guitar added to the festivities. The eldest son, Henry, or "Harry," once took the lighthouse team to New Town (San Diego) on a lark with friends, ending in an upset with a damaged wagon and a lost team. Robert Israel as lighthouse keeper could have agreed with the expression "good help is hard to find," as he had an ongoing dispute with the assistant Philip Savage over chores. Savage refused to whitewash the chicken coop, thus inadvertently pointing out one source of food at the lighthouse.

Wild game such as quail, duck, and rabbit were available and hunters preferred the shotgun for them. We know Robert Israel had a shotgun used to warn away boats during fogs. He may well have also used it to supply the family

The outbuildings disappeared piece by piece. David Flynn, writing in 1911, recalled as a youth coming upon something on the slopes of Point Loma, lost in a dense tangle of "manzanita mangle wood ... blue sage, and California holly." What he saw was "astonishing yet familiar" and appeared as "the most incongruent edifice one would ever see or visualize." Inside this shapeless structure he saw a "shift card table" covered with an army blanket and a couple of decks of cards, wooden beer kegs for seats and "many empty liquor bottles." Flynn concluded it was a secluded place made of "portions of the old Point Loma Lighthouse [which] had been purloined from time to time ... [until] it had disappeared" and evidently used for sports that certain enlisted men enjoyed."

Thus it appears that soldiers of neighboring Fort Rosecrans had disposed of the last of the lighthouse outbuildings.

The lighthouse's invisible landscapes

by Roger Kelly

Cultural Resources Team, San Francisco Support Office, NPS

To regular visitors and those of us who have visited Cabrillo on NPS business over many years, the lighthouse's modern landscape shows a continuing evolution from year to year, much like subtle tidepool changes, eddying around coastal cliffs and rocks.

Once supporting stands of scattered oaks, cottonwoods and sycamores in favored locations, the toe of Point Loma by mid-19th century had changed to a rocky and sandy terrain, sparsely covered with sage, lemonadeberry, chaparral, and bunch grasses. Throughout the years of operation and residence, only wagon roads, paths, and delineating picket fences altered the immediate lighthouse "grounds" and outbuildings—all tightly clustered into a family homestead, which happened to contain the focal point of a lighthouse. Historic photos, observations of visitors, keepers' logs, diaries, and correspondence, and later historical studies document the late 19th-century landscape as barren, unaltered and unadorned. After a long period of abandonment, subsequent military use changed both function and landscape character, adding two access roads, including what is now the Bayside Trail, and minor features such as a brick windscreen wall, full-length wooden porch, and tall antenna with concrete post supports. Public access continued after 1919; by then, some military features had been removed. In the 20th century, landscape continuity with surrounding terrain had been broken by the cul-de-sac roadway, encircling and isolating the Lighthouse in its now-familiar ellipse.

Beginning in 1933, documentation of the surviving Lighthouse by WPA historic architects and an ambitious plan to transform it into a federal public park were completed. Very significant landscape changes—restroom construction, structural preservation, and formal plantings with urban-style "street furniture"—transformed the lighthouse landscape.



Sketch of historic lighthouse grounds by Gladys Neuber, long-time associate of Cabrillo Historical Association

In support of the 1996 General Management Plan proposal to establish a more historically accurate visual landscape character for the lighthouse, Superintendent DiMattio requested archaeological research to locate any surviving physical evidence of 19th-century outbuildings, fence lines, or other historic landscape values.Small hand-dug test pit excavations and larger machine-dug areas were placed in hopes of locating outlines of the assistant keeper's residence and "water closet," barn, and fence alignment. Historic photos, maps, and analysis of cultural landscape values by NPS professional staff in 1993 were invaluable in planning archaeological testing.

Given the landscape history sketched above and documented in 1993 by the Service, what were the results of the archaeological work?

Unfortunately, no physical evidence of the several 19th-century outbuildings was found. But revealed in the excavation units was the historic "use surface"—a grade level just above bedrock which formed the "barnyard" or ground surfaces around the outbuildings during the 1860–1890 period. This "use surface"— now about 28 to 30 inches below today's visible ground surface—is probably the same as shown in historic photographs as an uneven and rocky surface. But within the cluster of outbuildings, this natural level became compacted, dense in texture, gray in color, and contained small rock pieces—typical of soils from stock pens. Bedrock was found at about 30 inches below today's visible grade.

During the NPS "restoration" work in 1934-35, the original grade was "rough graded" to achieve a uniform level, according project supervisors Sam D. Hendricks and Walter G. Attwell, thus removing much of the 19th century "use surface." To support the landscape plantings, a sandy loam top soil was obtained from nearby Point Loma sources and mixed with peat moss and local barn-

yard mature fertilizer, adding about 18 to 20 inches more to raise the elevation of the "new" grade. Irrigation systems of one-inch water pipe were installed into this new fill to provide water to plantings.

Archaeological investigations show the stratigraphic sequence of bedrock, historic 19th-century "use surface," a thin intermediate layer representing the "rough grading" activities of 1934, and a final layer, including 1935 irrigation pipe, which is the introduced landscaping fill. These layers usually totaled a 36-inch depth, although actual thickness of the layers did differ between excavation test unit locations.

Almost no artifacts were recovered from ten test pits. But at the interface between the 19th-century use surface and the thinner "rough grading" level, a few small, thin pieces of window and container glass were observed. Many minute pieces showed weathering and exfoliation which suggests 19th-century materials. A larger artifact was a piece from a small fluted glass tumbler. A few very rusted nails were also found. None of these fragmentary artifacts are diagnostic as to period of Lighthouse occupation and use.

Even though archaeological work did not identify the exact location of outbuildings, information was generated about the hidden landscapes that once provided a context for the structure. From an active family homestead centered around a very important maritime functional building, to an orphaned and derelict structure, to a "museum house" within an exhibit-style setting, the lighthouse's landscape environment will change again toward a more appropriate and authentic scene.

Transportation at the lighthouse



In the years after the Civil War the district inspector recommended a sail boat be assigned to the Point Loma keepers, and in 1868 he ordered one. By 1872, it had not arrived and the keeper requisitioned either a sailboat or a horse and wagon. Still nothing was done and by 1875 the district inspector recommended that the keeper be supplied with horses and wagon. The Board quickly authorized the Inspector to obtain "a pair of California horses, and a wagon" with the stipulation that the keeper would be required "to haul all supplies and necessaries to the station." Five years later, the Board authorized selling the horses and wagon at public auction and purchasing a sailboat "for transportation of supplies" to the Point Loma station. (Holland and Law, p. 56)



SAN DIEGO HISTORICAL SOCIETY PHOTO

Wanted:

The Education Department is in the process of rewriting the 2nd grade Lighthouse Program. We would like to have a variety of props to make the program come to life. Here is a list of items that will be needed:

- wash stand
- kitchen work table
- rocking chair
- kitchen implements
- what-not stand
- toys such as jump ropes and tops
- wooden spools (those things that hold thread) These will be used to make supports for a set of shelves for kitchen equipment.

All furniture must either have been manufactured from 1860–90 or be an accurate reproduction of the time.

Please contact Emily Troxell concerning any of these items at (619) 557-5450, ext. 2242 or Emily_Troxell@nps.gov

Traveling Libraries



Probably in the 1880s, certainly prior to 1890, the Lighthouse Board began supplying portable libraries to the keepers. The books were arranged in cases which "make rather a neat appearance when set up on a table, and they only need be closed and locked to be ready for transportation." Each contained about 50 volumes "of a proper admixture of historical, scientific, poetical, and good novels, together with a Bible and a prayer-book." The libraries were usually exchanged at the quarterly inspection. (Holland and Law, p. 56)

Trying times on Point Loma

By Alexander D. Bevil

Reprinted from the March 1990 issue of *The Explorer*. San Diego Historian Alex Bevil was a volunteer at Cabrillo when he wrote this article.

During the annual migrations of the gray whales past Cabrillo National Monument, hundreds of visitors come to take advantage of the view from the Old Point Loma Lighthouse area. As they search the waters below to try to spot the whales, few visitors realize that over a century ago others were interested in whale watching, but not for the same reasons.

In order to augment their meager salaries, some of the keepers of the Old Point Loma Lighthouse "moonlighted" as whale watchers for the various shore whaling companies that operated from Ballast Point in those days. Because the gray whales swam so close to shore, these shore stations could operate with only the smaller whaleboats instead of the larger ships.

The keeper scanned the water from the balcony of the lighthouse tower, and when he spotted the spout of a surfacing whale he would fire his pistol into the air. This would send crews from the rival whaling stations on Ballast Point into their whaleboats and they would begin rowing for all they were worth out to the ocean beyond the kelp beds. Townspeople would also come riding up from the communities of Roseville and La Playa and even from San Diego across the bay to enjoy a picnic and view the drama from the cliffs overlooking the water.

Sometimes the crews would already be out in the water around the kelp beds drinking ale and looking up at the lighthouse. When the keeper saw whales he would raise a red kitchen tablecloth on a nearby flagpole.

Until the 1850s the harpooners of the whaleboats would have to throw a lance-like harpoon at the whale. The harpoon was affixed to a line which was slowly played out as the whale swam away from the boat, giving the crew what was known in those days as a "Nantucket sleighride." At times the enraged whale would charge the frail whaleboat, staving it in or crushing it and drowning the crew.



When the whale began to tire, the mate in charge of the whaleboat would admonish the men by saying, "A dead whale, lads, or a stove boat!" As they neared the wounded beast, the harpooner would throw additional harpoons until the whale was dead. The carcass then had to be towed back to the shore station for processing.

By 1850 the harpooners had a newer, more lethal weapon —a shotgun-like shoulder-fired gun which propelled an explosive charge into the whale, usually killing it on the first try. In 1865 the darting gun or bomb lance was introduced. This weapon consisted of a stockless gun barrel affixed to a harpoon pole with a heavy iron wire protruding from mid-shaft. When the harpoon was thrust into the whale, the wire triggered an explosive-charged bomb lance into the hapless mammal.

After the whalers had managed to tow the carcass back to the beach at Ballast Point (provided it didn't sink along the way), it was attached to crabs—hooked line affixed to winches—which brought the carcass close enough to the beach to be flensed. The flensing process removed strips of blubber, which were transferred to a mincing table and sliced into thin sheets called "bible leaves." These were dropped into "try pots," iron pots set in brickwork furnaces used to render oil from the blubber. The rendered oil was coopered and shipped to New England where it would be used for fuel, lubricants, medicines, and even cosmetics. The baleen was used for corset stays, umbrella ribs, and artificial limbs. The remaining carcass was allowed to float out with the tide and was scavenged by sharks and seabirds. A black, sooty pall of greasy smoke hung over the tryworks, and the stench was overpowering.

By 1873 it was becoming more and more difficult to find the gray whales. The shore whalers had to row as much as ten miles offshore to find them. The combined effects of ship and shore whaling and the slaughter of pregnant and immature whales at their breeding grounds nearly drove them to extinction. The introduction of petroleum- based oil and the production of steel greatly reduced the demand for whale oil and baleen.

Finally, in that year, the U.S. Army Corps of Engineers evicted the shore stations from Ballast Point in order

to build a 15-gun fortress. The stations moved across the channel to a bend in the North Island coast that would become known as "Whaler's Bight." This site was short-lived, abandoned in 1906 when the Army built Fort Pio Pico to defend the approach to San Diego Harbor. (This fort was dismantled in 1919, and modern maritime charts show no reference to Whaler's Bight.)

According to local journalist Herbert Lockwood, a whale once had its revenge of sorts. During World War I the country urgently needed fats and oils for munitions manufacture, so there was a temporary resurgence of local whaling. An auxiliary schooner, the *San Diego,* hunted what was left of the gray whales with a prow-mounted deck gun that fired grenade-tipped harpoons which exploded inside the whale. The animal was then winched onto the ship. On one occasion, a whale was harpooned, but the grenade failed to explode and the whale escaped, only to die of its wounds later and float on the surface for days. It became riper and riper, and one day a large sportfishing boat collided with it. The resulting explosion showered the passengers with putrefying whale parts and rancid oil. The vile aroma of the boat preceded it into port, where it took hours to wash it down. The wives of the fishermen made them sleep in the woodsheds behind their houses for days.

The whales, now protected, have made a remarkable comeback from the brink of extinction. The breeding grounds have been turned into protected sanctuaries where the grays no longer fear the exploding lance of the harpooner. They even allow humans to touch and pet them in these sheltered lagoons where not so long ago hundreds were slaughtered. Either the whales have very short memories or they are among the most forgiving of God's creatures.

Water Woes at the lighthouse



Water at Point Loma was a problem, as was to be expected in an area of little rainfall. In 1883 a cistern was authorized and constructed, and at some subsequent time, an additional cistern was excavated. The cisterns were adequate during years of normal to heavy rainfall, but for those years where rainfall was light, the water problem again arose. When water was short the lightkeepers loaded two 50-gallon barrels into their wagon and journeyed nearly ten miles to "a well in a canyon back of Roseville." The filled barrels were then carted back to the lighthouse over a dirt road generously littered with chuckholes. (Holland and Law, p. 60)



Mistress Keeper, how does your garden grow?

In 1869 the editor of the *San Diego Union* wrote, "A short drive up a ridge brought us to the lighthouse upon the towering topmost height. A fence enclosing about an acre and a half surrounds it. Mr. Jenkins, the keeper met us at the gate and escorted the ladies to the entrance where they were received by his wife. Neatness and order prevailed in the little enclosure. The flower beds surrounded by abalone shells, the tidy walks and neatly arranged beds of cultivated earth told at a single glance the story of the taste and industry of these industrious inhabitants of this lonely tower. Beside the walls of the house some tomatoes were just opening, while well grown potato vines and other garden vegetables luxuriated in the genial sun and wooing breeze."

Five years later, in 1874, the *Union* reported that, "The vegetation around the lighthouse was very meagre, consisting of a very low, scrubby sage brush. Mrs. Israel told us that she had endeavored in vain to make a few of the most hardy flowers and vegetables grow, but the position was too much exposed to admit of cultivation. . .

Undaunted by the hostile clime which made growing vegetables so difficult, Mrs. Israel set out a tomato plant near the kitchen door, and by careful nursing and pampering she kept it alive and yielding for several years." (Holland and Law, p. 68)

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Ghosts of the lighthouses

by Tracey Kennedy

Reprinted from the March 1991 edition if *The Explorer.* Tracey wrote many articles for this publication.

As I entered the lighthouse to close it for the day, my mind shifted back to something that happened last night. The rangers at Cabrillo are responsible for closing the Old Point Loma Lighthouse prior to closing the park each evening. Having worked as a ranger for quite a while, this was routine duty for me. That is, until last night. I almost feel silly talking about it—after all, who really believes in ghosts?

Apparently, quite a few people believe in ghosts or ghost stories, especially when they are associated with an old building. Lighthouses offer the perfect setting for ghosts to hang out. They are usually old buildings, often in a remote and windy location that can produce eerie, frightening noises. Some lighthouses attract visitors whose sole interest is a ghostly legend surrounding the structure.

The Heceta Head Lighthouse in the center of the Oregon coast is one such lighthouse. The adjacent residence was occupied by lighthouse keeper Oswald Allik and his wife, Alice. During the many years they lived there, they conducted tours for thousands of visitors. Heceta had a reputation of being haunted. It was rumored that unidentified noises could be heard in the attic area, open doors were often slammed shut, windows left closed were found opened, and items that had disappeared were sometimes found in another location. Visitors' interest inevitably centered on questions about the haunted house, but the Alliks never publicized the alleged ghosts, neither agreeing with nor denying their existence.

One evening, years later; Harry Tammen, the caretaker of Heceta House, his wife and some friends were playing cards when they heard a deathly scream. No traces of the screamer's whereabouts were found. Another incident involved a worker who, while remodeling the Heceta House attic, saw the reflection in a window of a elderly woman dressed in an 1890s gown.

During the construction of the Yaquina Head Lighthouse in 1872, as the story goes, one worker fell to his death between the double walls of the masonry. Due to the difficulty in removing his body, it was supposedly left entombed inside the walls. It was common knowledge among the lightkeepers that it was the ghost of this victim who haunted the tower. They would often hear someone enter the tower and come up the spiral staircase when, of course, no one was there. John Zenor, keeper for 22 years, said the ghost stayed until after World War II. No one knows why the ghost left—or if there is any real basis for the story of its existence.

The nearby Yaquina Bay Lighthouse also has a ghost in its past. Muriel Tevenard apparently lost her life due to strange happenings at this lighthouse a century ago. While staying in town, she had met some campers who decided to explore the interior of the then abandoned lighthouse. Upon leaving, Muriel decided to reenter to retrieve a pair of gloves she had left behind. Shrill screams were soon heard, and Muriel was never seen again—at least not in a physical body. Many Coast Guard men on duty have since reported seeing strange lights in the empty lantern house where Muriel was last seen. Another time, a man on duty saw a light coming closer, apparently held in the hand of a young woman. Upon swinging his floodlight on the apparition, nothing further was seen. Baranof's Castle in the Russian Alaskan capital of Sitka also has its ghost stories.

Several structures were built in the same location, beginning in 1804. The building of 1837 had a lighthouse tower with an unexplained flickering flame that many times blew out. Its keepers often blamed a ghost for this phenomenon. Another legend surrounding this lighthouse "castle" has to do with a beautiful Russian princess. Allegedly, she was the daughter of one of the governors and had fallen in love with a common seaman. Instead of spending a life with her beloved, she was forced to marry someone of noble rank. Unable to stand the agony of the situation, she disappeared from her wedding festivities, only to be found later dead in her chambers. It appeared she had taken her life. Every six months after her death the jewelry on her

hands and the swirl of her wedding gown could be heard, along with the intense fragrance of wild briar roses.

Last night as I walked to the lighthouse I watched a thick fog bank completely enclose the top of Point Loma. Visibility was down to a few feet within moments. No visitors were to be found anywhere. Just as I was locking the door to the lighthouse for the evening, a faint smell overtook me. Wasn't that the smell of natal plum pudding coming from the kitchen area? Nah, I thought. I must be imagining things. Walking back to the administration building I glanced to where I knew the ocean should be. There was the faint silhouette of a young girl holding a lit lantern...

Have you read *The Ghost of Cabrillo Lighthouse* yet? That's where my ghost story came from. As for the other ghosts, they still exist in legends and stories, and for some people are a very real thing. Are there really any ghosts in the Old Point Loma Lighthouse? That is a commonly asked question by park visitors. I don't know for sure, but let us know if you experience anything strange or out of the ordinary on your next visit.



Help us celebrate

Join us at Cabrillo NM to celebrate the 84th birthday of the National Park Service on Friday, August 25, 2000. Admission to the park will be free that day. The lighthouse tower will be open to the public from 10 AM until 4 PM, and birthday cake will be served in the visitor center view building.

Cabrillo People

For many months, the staff of Cabrillo National Monument was very stable, but all of a sudden people have begun to come and go. We are in a period of change, and we would like to tell our readers about some of these staff changes.

Leto Rulloda comes to us from Point Reyes National Seashore where he worked in the Interpretative division. Here he will be working in the entrance station, along with **Carol Ann Vallee**, and helping with resource management projects. Leto, his wife and two children have lived here in Chula Vista for many years. He is a veteran of our armed forces. We welcome him to our park family and hope that he will be happy working in this location.

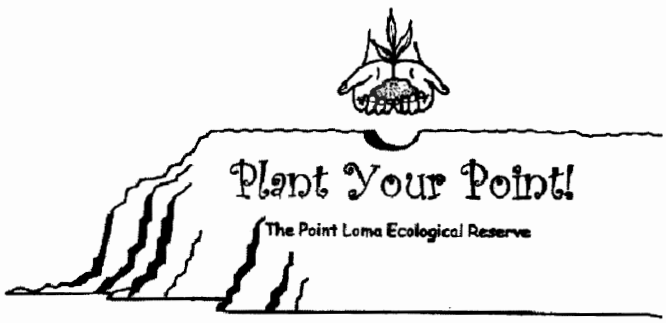
Fred Andrews is a new addition to the Interpretative Staff, but not a newcomer to our park. Fred started here as a San Diego State intern a number of years ago. At the completion of his internship he continued to volunteer when time allowed. He has spent many hours helping visitors explore the intertidal area. Last year, Fred undertook the responsibility of Crew Leader for the Youth Conservation Corps team here at Cabrillo. Under his guidance, his young people learned about the coastal sage scrub, and completed projects geared to preserving this habitat. Fred has worked for some time as a living-history interpreter at Old Town State Historic Park. He was a long term employee at Tijuana Estuary where he spent time helping visitors enjoy the marshland habitat. Fred has recently branched out, working as a substitute teacher.

Traci Myles is a familiar face at Cabrillo National Monument. She was an intern out of Prairie View A & M in Texas for the CNM Interpretation Division during the summer of 1996, then returned last summer as a Supervisor for the Youth Conservation Corps (YCC). She is back as a Park Guide, operating the Visitor Center, introducing auditorium programs, and conducting guided walks. When not brightening Cabrillo with her infectious smile and positive personality, she is kept busy with five children still at home. Showing the true conservation spirit befitting a National Park Service employee, Traci has a keen interest in sustainability and building with renewable resources, and has even constructed a straw bale shed with a bamboo frame supporting a roof of palm leaves. Welcome back, Traci! (What about a new straw bale entrance station?!)

In May we bade a fond farewell to Park Ranger **Mark Long** as he left to enter the Secret Squirrel world of Department of Defense/Defense Security Service as a Special Agent. Mark's ties to Cabrillo go back to the early 1990s; when not working at Cabrillo, he could be found rangering at Yosemite. Married to bride Tanya in San Diego in 1994, he left Cabrillo in 1996 to join the Department of Defense in Herlong, California to gain permanent status. He returned to Cabrillo in 1997 following another stint at Yosemite. Mark will be duty-stationed in San Diego and will be conducting investigations for DOD. He is currently in a pre-academy mentoring program, and will be attending the agency's five-week training academy in Maryland beginning July 10. The park ranger lineage was assured on March 21 when Mark and Tanya (and the baby-crazy women of Cabrillo) welcomed the arrival of baby Brett. Best wishes to the Long family!

Debbie Stetz Seracini ended her six-year career at Cabrillo National Monument in early May. We will miss her and the many services that she performed here. Under her care, the library flourished. Debbie was part of the team that developed and wrote the new CNMF publication, *An Account of the Voyage of Juan Rodríguez Cabrillo.* She also was part of *The Explorer* staff, eventually becoming its editor. Debbie has a variety of plans for her future, but the first order of business was to travel to Italy for her wedding to Massimo in his home town. We wish both of them all the best in their future careers!

And another spring wedding united our chief of natural resource science, **Samantha Weber** to Joseph B. Meyer, a geographic information systems specialist at Yosemite NP. They are not certain when and where they will be living in the same house, but Samantha says it has to be soon or they will both go broke and run out of vacation time. We wish them a lot of happiness and good luck.



PLANT YOUR POINT!

by Carol Knipper

During the past several years we've been working hard to remove exotic plants and trees from Cabrillo National Monument and the Point Loma Ecological Reserve. Removing these weeds will allow native plants to grow back and create a healthy habitat for the diverse species of native birds, mammals, insects, and reptiles that make Point Loma their home. To speed up this natural process we need your help! We need you to nurture native plant seedlings to maturity. "Adopting" even a few pots with native plant seeds will make a huge difference in our efforts to restore the natural wonders of Point Loma. It's easy and fun! We will provide you, your family, co-workers and anyone else with pots, soil, and native plant seeds. You simply water and watch them grow. Next winter, when these young plants are ready we will invite everyone out to Cabrillo NM and the Point Loma Ecological Reserve to plant them. You will be an important part of your Point!

Please call Carol Knipper at (619) 523-4563 or e-mail her at carol_knipper@nps.gov and say, "I want to adopt native plants!" We will be happy to give you everything you need to get you started. If you would love to help out but don't have a green thumb you can donate $5 for each plant and we will have it grown for you. To do this, make your check out to National Park Service and write, "plant adoption" on the check.

Thanks for your help and for taking the time and effort to make Point Loma an even more beautiful place.

Volunteer News

by Mary Beth Vygrala

The annual volunteer recognition dinner was held in April. Nearly 75 people attended the "Night in the Orient" event. Big hits at the party were volunteer Shelley Duncanson attired as a sumo wrestler and volunteer Jim Stewart dressed as a Benihana chef-school dropout. Special recognition was given to Mike Love who has donated over 1000 hours in less than a year. Tidepool volunteer Lynn Moss has now taken on the extra duty as editor of the VIP Newsletter. This publication is written by and for the volunteers. Any volunteer wishing to contribute may leave a note in Lynn's mailbox.

Resource science volunteer Anita Burkett will tie the knot with ranger George Herring this summer. On a sad note, long-time volunteer Bill Armstrong passed away this winter; we certainly miss our smiling "mailman." Last but not least, a biiig thank you to all

CABRILLO NATIONAL MONUMENT FOUNDATION

The Foundation greatly appreciates the support of the following individuals and organizations who have become members during the period March 25–May 31, 2000

Audrey Anderson
Michael Ardelt
William and Sally Ashburn
Ed and Luann Beberman
Ellen Black
Body Engineering
Dr. and Mrs. John Bruhn
Michael Brumley
Richard Chavez
Victoria and Vincent Ciccone
Mark and Laura Clapper
Mr. and Mrs. Michael Collins
Jeffrey Cook
Rosalina Covarrubias
Mr. and Mrs. Joseph Craver
Mr. and Mrs. G.W. Curtis
Col. Merrill M. Day
Miriam Doornink
Mr. and Mrs. Kim Duclo
Shelley Duncanson
Mr. and Mrs. Charles H. Dunning
Mr. and Mrs. James Earwicker
Clo Edgington
David and Anne Fege
Mr. and Mrs. August Felando
Delia Fernandez
Paula Finley
Neil Flynn
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George Gildred
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Tom and Maryanne Pearson
Sharon Perry
David and Yvonne Posner
Mary Powell
Dr. and Mrs. John L. Power
Robert and Allison Price
George Rahe, Jr.
John and Ruth Reid
David Saad
Marcia Schofield
Carl and Patricia Scragg
Mr. and Mrs. Abraham Shragge
Barbara Smith
Bob and Mary Smith
John Snow
Howard Stern
John and Marcia Suter
Dr. and Mrs. Joseph Telford
The Black
Susan Trump
Mr. and Mrs. Edgar Tye
Gretta M. Upp
Mr. and Mrs. Thomas N. Volle
Joan Vollmer
Kathryn Whistler
Mr. and Mrs. Michael Whitlock
Mr. and Mrs. Ed Wills
Marci Yaremko
Sue Zesky

Member Events & Announcements

August 25, 2000,
The Annual Meeting of the membership will take place in conjunction with the National Park Service's 84th birthday. The Old Point Loma Lighthouse tower will be open to the public on this date.

October 1, 2000
Cabrillo Festival

Friday, October 13, 2000
Members will be invited to a special "Moonwalk" tour at Cabrillo National Monument during the full moon.

More information about these events will be mailed to all members at a later date.

For information about membership in the Cabrillo National Monument Foundation write CNMF at 1800 Cabrillo Memorial Drive, San Diego, CA 92106 or phone (619) 222-4747



Learn more about the Old Point Loma Lighthouse

by Karen Eccles



The Old Point Loma Lighthouse is a historic local icon and an important part of Cabrillo National Monument. The bookstore, located in the Visitor Center the Monument, has many interpretive items to tell you more about the lighthouse and what went on there. Here is a partial list of items to give you an idea of the many ways you can learn more about the venerable old structure.

·*America's Lighthouses* by F. Ross Holland. A comprehensive history of the United States Lighthouse Service. Paperback, $12.95.

·*Four Sentinels* by June Moeser. A chronicle of San Diego lighthouses. Paperback, $7.95.

·*Ghosts of Cabrillo Lighthouse* by John Sinor. A ghost story for young readers set at the Old Point Loma Lighthouse. Paperback, $5.95.

·*Guardians of the Lights* by Eleanor DeWire. Stories of United States lighthouse keepers. Paperback, $18.95.

·*Lighthouses* by F. Ross Holland. A historic look at the development of lighthouses. Hardcover, $16.98.

·*The Lighthouses of the United States in 1874* by Charles Nordhoff. A group of four articles from magazines in the late 1800's describing life at the lighthouses of the time. Paperback, $6.95.

·*The Old Point Loma Lighthouse* by F. Ross Holland. A complete history and overview of the OPLLH, one of the first eight lighthouses built on the West Coast. Paperback, $4.95.

·*Sentinels of Solitude* by Jim Gibbs. A look at Pacific Coast lighthouses.

·An accurate model of the OPLLH produced by Harbor Lights. $49.95.

·Several stitchwork charts or kits ranging from $5.50 to $46.00.

·Also, many posters, matted and framed prints, notecards, bookmarks, puzzles, postcards, and a screen saver featuring the lighthouse.

We hope this list and the articles in *The Explorer* will inspire you to come to Cabrillo National Monument to visit and learn more about the Old Point Loma Lighthouse.

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Cabrillo National Monument Foundation
1800 Cabrillo Memorial Drive
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UNITED STATES LIGHTHOUSE SOCIETY
UNITED STATES LIGHTHOUSE SOCIETY
244 KEARNY ST. 5TH FLOOR
SAN FRANCISCO CA 94108

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, a distance of about 800 miles of coast line, and embraces all the aids to navigation on the sea-coast, bays, and navigable rivers of California.

Inspector.—Commander Nicoll Ludlow, U. S. Navy, until February 1, 1890; since then, Lieutenant-Commander Thomas Perry, U. S. Navy.

Engineer.—Major William H. Heuer, Corps of Engineers, U. S. Army.

There are in this district—

Light-houses and lighted-beacons	35
Day or unlighted beacons	48
Fog-signals operated by steam	14
Fog-signals operated by clock-work	5
Whistling-buoys in position	13
Bell-buoys in position	3
Other buoys in position	79
Steamer *Madroño*, buoy-tender, and for supply and inspection	1

LIGHT-HOUSES.

766. *Point Loma, entrance to San Diego Bay, California.*—Plans for the structures to be erected at the new site of this station having been prepared, bids for the work were opened August 21, 1889, and contracts were entered into with the lowest bidders for the buildings and for the iron tower. The contractors for the buildings commenced work immediately and pushed it vigorously to completion, although they were slightly delayed by bad weather and detentions in transportation of material, but their work was done in a good and substantial manner and is in every way satisfactory. A new barn was also built and the concrete foundation for the iron tower was prepared. The iron tower was finished and will be immediately erected as soon as received at the site, and the new lens will be put in position. The station will then be in a complete condition. It is expected that the new light can be exhibited early in the coming year.

767. *Ballast Point, entrance to San Diego Bay, California.*—Contract was made for the construction of the dwellings, grading the grounds, etc., at this station. Work was commenced about February 1, 1890, and finished March 31. The iron-work of the lantern was made in San Francisco, under contract. It was erected in the tower and the illuminating apparatus was put in position. The fog-bell house was built, a bell was purchased and hung, and the clock-work for striking the bell was put up. The station occupies the extreme end of Ballast Point, San Diego Bay, California, and as completed comprises a light-house tower and keeper's dwelling combined, a dwelling for an assistant, and a fog-bell house. The light, which is of the fifth order, fixed white, was

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, a distance of about 800 miles of coast line, and embraces all the aids to navigation on the sea-coast, bays, and navigable rivers of California.

Inspector.—Commander Nicoll Ludlow, U. S. Navy.

Engineer.—Major William H. Heuer, Corps of Engineers, U. S. Army.

There are in this district—

Light-houses and lighted beacons	22
Day or unlighted beacons	47
Fog-signals operated by steam	12
Fog-signals operated by clock-work	4
Whistling-buoys in position	13
Bell-buoys in position	3
Other buoys in position	78
Steamer *Madroño*, buoy-tender, and for supply and inspection	1

LIGHT-HOUSES.

675. *Point Loma, entrance to San Diego Bay, California.*—On April 1, 1889, the characteristics of this light were changed to fixed white, varied by red and white flashes, one minute interval between flashes. Congress made an appropriation of $30,000 for the re-establishment of this station on a lower level. The site selected is about 30 feet above sea-level and 60 feet from the bluff. Plans for the structures are under consideration.

676. *Ballast Point, entrance to San Diego Bay, California.*—Congress having appropriated $25,000 to establish aids to navigation at this point, a site for the new station was selected on the extreme end of the point. Plans for the structures are under consideration.

—. *Deadman's Island, at the outer end of the jetty on the east side of the entrance to San Pedro Harbor, California.*—The following recommendation which was made in the Board's last annual report is renewed:

> The port of San Pedro, or Wilmington, is the sea-port for Los Angeles. An enormous quantity of coal, lumber, and general freight is brought into this little harbor, which was made by breakwaters constructed by the United States. Deeply laden schooners discharge inside the harbor, while deep-water ships discharge into lighters out in the bay. It is necessary to use the tides in getting into this harbor, as there are but 12 feet of water on the bar at low tide. Fogs prevail at all seasons, and it is difficult to find the entrance at night or in foggy weather. It is recommended, therefore, that a harbor light and fog-bell operated by clock-work be established on Deadman's Island, at the entrance to this harbor, at an estimated cost of $5,000. This small island belongs to the Government, and is large enough for the purpose.

678. *Point Hueneme, entrance to Santa Barbara Channel, California.*—Some 480 feet of new fence were built and the old portion repaired. On April 1 the characteristics of the light were changed to fixed red.

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, a distance of about 800 miles of coast line, and embraces all the aids to navigation on the sea-coast, bays, and navigable rivers of California.

Inspector.—Commander Nicoll Ludlow, U. S. Navy.

Engineer.—Captain Albert H. Payson, Corps of Engineers, U. S. Army, to November 30, 1887; since then, Major William H. Heuer, Corps of Engineers, U. S. Army.

There are in this district—

Light-houses and lighted beacons	22
Day or unlighted beacons	47
Fog-signals operated by steam	12
Fog-signals operated by clock-work	4
Whistling-buoys in position	7
Bell-buoys in position	3
Other buoys in position	58
Steamer *Madroño*, buoy-tender, and for supply and inspection	1

LIGHT-HOUSES.

637. *Point Loma, entrance to San Diego Bay, California.*—Some slight repairs were made here. The characteristic of this light is to be changed from fixed white to flashing white and red. The Board made the following statement, with reference to lowering this light, in its last annual report:

> The focal plane of the light in its present position is 462 feet above the sea level. It is the highest light-house in the United States, and is quite often obscured by high fogs when the coast line below is plainly visible. These facts induce the Board to recommend the lowering of the light to a less elevated site, as in its present position it is of little practical importance as an aid to navigation. It is estimated that it will cost $30,000 to build a light-house tower, oil-house, keeper's dwelling, and outhouses at the lower site selected for the purpose.

A bill for that purpose has been passed and steps will be taken to make this change as soon as practicable.

—. *Ballast Point, entrance to San Diego Bay, California.*—The lighting of this harbor, which is one of the most important on the Pacific coast, has heretofore been largely left to private individuals. The Board is of the opinion that this practice entails an expense upon the merchants of San Diego which they should not be called upon to bear, and which is wrong in principle. Nor is it desirable to leave such important commercial interests in private hands. The entrance to this port should have enough lights to enable masters of vessels to move up or down the harbor at night with as much confidence as in day-time. The growing commerce of this section calls for every aid to navigation that can

APPROPRIATIONS MADE AT THE FIRST SESSION OF THE FIFTIETH CONGRESS FOR LIGHT-HOUSE PURPOSES.

Congress at its current session appropriated $804,248 for new aids to navigation. The plans for building them have been, or are being, made, and the works will be carried on with all proper rapidity.

SPECIAL.

Goose Rocks, Maine, light and fog-signal, and Channel Rock day-beacon, Maine	$35,000
Crabtree Ledge light-station, Maine (additional)	13,000
Lubec Narrows light-station, Maine (additional)	12,000
Deer Island light-house and fog-signal, Massachusetts (additional)	6,000
Hell Gate light-station, New York	1,350
Castle Hill light-station, Rhode Island (additional)	5,000
Castle Hill light-station, Rhode Island, making the appropriations of August 4, 1886, of $10,000, and of March 30, 1888, of $5,000, available for the purchase of a site.	
Stonington Harbor and Breakwater light and fog-signal, Connecticut	8,000
For the relief of Col. James C. Duane, Corps of Engineers, U. S. A., formerly engineer of the third light-house district	648
Absecon Inlet, buoy depot, New Jersey	1,500
Cape May boat-house, New Jersey	750
Cob Point Bar light-station, Wicomico River, Maryland	15,000
Holland's Island Bar light-station, Kedge's Straits, Chesapeake Bay, Maryland	35,000
Tangier Sound light-station, Chesapeake Bay, Virginia	25,000
Great Wicomico River light-station, Chesapeake Bay, Virginia	25,000
Newport News Middle Ground light-station, Virginia	50,000
Buoy depot, Washington, N. C.	5,000
Hunting Island light-station, South Carolina	51,000
Charlotte Harbor light-station, Florida	35,000
Crooked River light-station, Florida	40,000
Lake Borgne light-station, Mississippi	8,000
Tender for the Gulf coast	27,000
Sand Island light-station, Alabama, protection of the site	12,000
Additional aids to navigation at the mouth of the Mississippi River	27,500
Cedar River light-station, Green Bay, Michigan	25,000
Pier lights at Duluth, Minn., Kewaunee, Wis., Charlotte Harbor, New York, and Port Washington, Wis	16,000
Spectacle Reef light-station, Michigan, repairing crib-work and fog-signal, etc	15,000
Two Harbors light-station, Minnesota, making the appropriation of $10,000, of August 4, 1886, available for the work.	
Northwest Seal Rock light-station, California	150,000
Point Loma light-station, California	30,000
Ballast Point lights and fog-signal, entrance to San Diego Bay, California	25,000
Umpqua River light-station, Oregon	50,000
Lighting the Illinois River	7,000
Oil-houses for light-stations	15,000
Supply steamer for the Atlantic and Gulf coast (additional)	32,500
	804,248

| | | |

1887

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, a distance of about 800 miles of coast line, and embraces all the aids to navigation on the sea-coast, bays, and navigable rivers of California.

Inspector.—Commander John W. Philip, United States Navy, until April 15, 1887; since then, Commander Nicoll Ludlow, United States Navy.

Engineer. — Captain Albert H. Payson, Corps of Engineers, United States Army.

There are in this district—

Light-houses and lighted beacons	22
Day or unlighted beacons	41
Fog-signals operated by steam	12
Fog-signals operated by clock-work	4
Whistling-buoys in position	7
Other buoys in position	57
Steamer *Madroño*, buoy-tender, and for supply and inspection	1

LIGHT-HOUSES.

614. *Point Loma, entrance to San Diego Bay, California.*—For the accommodation of the assistant keeper's family a room was fitted up in the wash-house by the keeper, for which the necessary material was furnished, as well as some few articles of hardware, locks, etc., for general repairs. The focal plane of the light in its present position is 462 feet above the sea level. It is the highest light-house in the United States, and is quite often obscured by high fogs when the coast line below is plainly visible. These facts induce the Board to recommend the lowering of the light to a less elevated site, as in its present position it is of little practical importance as an aid to navigation. It is estimated that it will cost $30,000 to build a light-house tower, oil-house, keeper's dwelling, and out-houses at the lower site selected for the purpose.

—. *Ballast Point, California.*—The recommendation made in the Board's annual reports for 1884 and 1885 is renewed: "When the light at Point Loma is transferred to its new site, a light should be placed on Ballast Point, as a guide into San Diego Harbor." A fourth-order light would enable vessels to enter the harbor during the night. The rapid increase in the commerce of the past year emphasizes the need of some such aid, and the Board is of opinion that a proper light should be established on Ballast Point at an early day, and it is therefore recommended that an appropriation of $25,000 be made for this purpose.

—. *San Luis Head (Port Harford), San Luis Obispo Bay, California.*—An appropriation of $50,000 for a fourth-order light and duplicate fog-

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, and embraces all the aids to navigation on the coasts and bays of California.

Inspector.—Commander George W. Coffin, United States Navy, until April 1, 1884; since then, Commander John W. Philip, United States Navy.

Engineer.—Capt. Albert H. Payson, Corps of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons	22
Day or unlighted beacons	30
Fog-signals operated by steam or hot-air engines	12
Fog-signals operated by clock-work	3
Bell buoy in position	1
Whistling buoys in position	4
Other buoys in position	33
Steamer Manzanita, buoy-tender and for supply and inspection	1

LIGHT-HOUSES.

517. *Point Loma, on west side of entrance to San Diego Bay, California.*—Several minor repairs were made here. As stated in the last annual report, this light is 462 feet above the sea, and is often obscured by high fog while the coast line is distinctly visible. As this makes the light of little practical value to navigation, a new site was selected lower down the cliff. The station is now in good order and condition, with some slight exceptions.

—. *Ballast Point, California.*—The recommendation made in the last annual report is renewed:

> When the light at Point Loma is transferred to its new site, a stake-light, similar to those in use on the Western rivers, should be placed on Ballast Point, as a guide into San Diego Harbor. Such a light would probably be all that is needed here for years to come. The expense would be practically limited to the pay of a keeper and the cost of erecting a building from which to display the stake-light, which would not exceed $1,500 or $2,000, as quarters for the keeper can doubtless be secured in the buildings near the point.

518. *Point Fermin, west side of entrance to San Pedro Bay, California.*—The revolving lens apparatus received a new pivot pedestal and improved clock machinery for the purpose of extending its running time to 10 hours without winding. Both pedestal and clockwork were sent out from the Staten Island depot. One of the castings of the latter was broken during its transportation and had to be repaired. The new apparatus is a great improvement over the old one. Various minor repairs were made to the buildings and fences. The station is in good condition, except some slight repairs.

1883

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, and embraces all the aids to navigation on the coasts and bays of California.

Inspector—Commander George W. Coffin, United States Navy.

Engineer—Captain Albert H. Payson, Corps of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons	22
Day or unlighted beacons	35
Fog-signals operated by steam or hot-air engines	11
Whistling buoys in position	4
Bell buoy in position	1
Buoys actually in position	43
Steamer Manzanita, buoy-tender, and for supply and inspection	1

507. *Point Loma, on the west side of the entrance to San Diego Bay, California.*—A new water-shed and cistern were completed in December and January. It has an area of 2,900 square feet, and is in the fenced enclosure about the keeper's dwelling. The cistern is of brick, with a capacity of 11,000 gallons, and will have a Douglass pump, with a suction-pipe. The station has received various minor repairs and is now in good order. This light is the highest in the United States, its focal plane being 462 feet above the sea. It is, in consequence, often obscured by high fog, while the rest of the coast line is distinctly visible. As this makes the light of but little practical value to navigators, a new site for it has been selected lower down the cliff.

—. *Ballast Point, California.*—When the light at Point Loma is transferred to its new site, a stake-light, similar to those in use on the western rivers, should be placed on Ballast Point, as a guide into San Diego Harbor. Such a light would probably be all that is needed here for years to come. The expense would be practically limited to the pay of a keeper and the cost of erecting a building from which to display the stake-light, which would not exceed $1,500 or $2,000, as quarters for the keeper can doubtless be secured in the buildings near the point.

511. *Point Conception, on the pitch of Point Conception, entrance to the Santa Barbara Channel, California.*—The brick tower, which passed through the old dwelling, was taken down to a point below the level of the roof, and the open space was re-covered. The whole east end wall of the dwelling was rebuilt. A picket-fence was built around one of

1882

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, and embraces all the aids to navigation on the coasts and bays of California.

Inspector.—Commander George W. Coffin, United States Navy.

Engineer.—Lieut. Col. Robert S. Williamson, Corps of Engineers, United States Army, until January 21, 1882; Lieut. Col. Charles S. Stewart, Corps of Engineers, United States Army, from January 21, 1882, to March 8, 1882, and from that date Capt. Albert H. Payson, Corps of Engineers, United States Army.

In this district there are——

Light-houses and lighted beacons	22
Day or unlighted beacons	32
Fog-signals, operated by steam or hot air	11
Whistling-buoys, in position	4
Other buoys, in position	34
Steamer Manzanita, buoy-tender, and used for supply and inspection	1

This district is well lighted and supplied with other aids to navigation.

LIGHT-HOUSES.

495. *Point Loma, west side of entrance to San Diego Bay, California.*—This light is the highest in the United States, its focal plane being 462 feet above the sea-level. It is in consequence often obscured by high fogs, while the rest of the coast line is distinctly visible, and it is thus made of little practical value as an aid to navigation, and a new site for it has been selected lower down. When it is moved to its new location, the erection of another light of the fifth order on Ballast Point, as a local aid to the navigation of San Diego Harbor, will become necessary. Meantime, however, a small stake-light, such as are in use along the Western rivers, should be placed upon Ballast Point. The water supply of the station is inconveniently limited and can only be increased by the building of a water shed and cistern. The capacity of the latter should be 10,000 gallons, and, to supply it with the rainfall of San Diego, 6 inches, will require the shed to be 2,800 square feet. This will be built during the current year. New mineral-oil lamps were fitted, and the keepers were instructed in their use. A store and boat house and boat-ways were built. The piles extending into tide-water were sheathed with copper, and a winch for hauling up the boat placed at the head of the ways, and other minor repairs were made.

496. *Point Fermin, at the west side of the entrance to San Piedro Bay, California.*—A barn was built and the revolving apparatus was repaired.

497. *Point Hueneme, on the mainland, at the east side of the southern entrance of Santa Barbara Channel, California.*—The shore line makes an angle at this point, and the numerous steamers and sailing vessels navigating the southern coast pass it close in. The land is low for 10 miles back of the beach, so that it is difficult to make it in the frequent hazy or thick weather. Considering these facts and the large and rapidly increasing commerce interested, it is recommended that a first-class steam fog-signal, at an estimated cost of $7,000, be established here, for which the artesian well, now at the station, would furnish an abundant supply of water. Complaint having arisen that the artesian-

TWELFTH DISTRICT.

This district extends from the boundary-line between California and Mexico to the boundary-line between California and Oregon, and embraces all aids to navigation on the coast and bays of California.

Inspector.—Commander Silas Casey, jr., United States Navy, until August 31, 1879, and Commander Charles J. McDougal, United States Navy, since that date.

Engineer.—Lieut. Col. Robert S. Williamson, Corps of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons	22
Day or unlighted beacons	31
Fog-signals (steam or hot air)	10
Whistling-buoys in position	4
Other buoys in position	23
Steamer Manzanita, buoy-tender, and for supply and inspection	1

This district has a great extent of coast-line and many parts of it are not within the range of any of the existing lights. The coast is fortunately very bold, and on clear nights the shores are visible, but the great number of fogs that envelope the coast makes the navigation near it very dangerous, and fog-signals should be established on Point Saint George, Point Sur, and Piedras Blancas.

A first-order light is also much needed at or near Point Saint George, off which there is a dangerous reef, on which several vessels have struck and many lives been lost.

LIGHT-HOUSES.

477. *Point Loma, on west side of entrance to San Diego Harbor, sea-coast of California.*—Extensive repairs were made to this station. The walls of the dwelling are built of soft sandstone, which disintegrates under action of the weather, and it was found necessary to cover the west side and south end walls with a heavy coating of Portland cement-mortar, after which they were painted with two coats of stone-color, rubber paint. The east side and north end walls were painted with three coats of stone-color, rubber paint. The eave-gutters were renewed, the cellar-walls were plastered inside with a heavy coating of cement-mortar, the cellar window-frames were reset in the walls, a new concrete floor was laid, new steps were built, the foundation-walls supporting the kitchen were rebuilt, and a new brick walk was laid from the front gate to the dwelling. The small inclosure surrounding the light-house structure was leveled up with clay. Slight repairs were made to the assistant keeper's dwelling and the store-house, which is under the same roof. The walls and roof of the assistant keeper's quarters and store-house, and the roof of the keeper's dwelling will be repainted, and the interior wall of the dwelling will be repaired this year. Otherwise the station is in excellent condition.

478. *Point Fermin, entrance to San Pedro Bay, California.*—A new cistern of 5,000 gallons capacity and an addition to the stable, were built at this station. Gutters were put on the stable and wood-shed, and conducting-pipes put in to lead the catchment from these roofs to the new cistern. Hains mineral-oil lamps were substituted for the

TWELFTH DISTRICT.

CALIFORNIA.

This district embraces all aids to navigation on the Pacific coast of the United States between the Mexican frontier and the southern boundary of Oregon, and includes the coast of California.

Inspector.—Commander Silas Casey, jr., United States Navy.

Engineer.—Lieut. Col. R. S. Williamson, Corps of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons	22
Light-ships	0
Fog-signals operated by steam or hot-air engines	10
Day or unlighted beacons	29
Buoys actually in position	32
Spare buoys for relief and to supply losses	53

Steamer Shubrick, common to twelfth and thirteenth districts, used for buoy-tender, for supply and inspection, and for construction and repairs.

The numbers preceding the names of stations correspond with those of the "Light-house List of the Atlantic, Gulf, and Pacific Coasts of the United States," issued January 1, 1878.

LIGHT-HOUSES.

448. *Point Loma, entrance to San Diego Bay, sea-coast of California.*—The assistant keeper's quarters, a room in the wood and oil storehouse, is in bad condition. This shed, or storehouse, which was built of rough, unseasoned boarding, lined inside with cloth and paper, and had openings in the walls, was unsuited for keeper's quarters. It has been lined with tongued and grooved boards, and otherwise repaired, but it is still unfit for quarters.

—— *Point Dume, California.*—This point was made a light-house reservation by the President's order of January 26, 1867. It is a rounded hill, the top of which is 202 feet above mean low tide, and is destitute of wood and water. In a little valley, about a mile up the coast, both wood and water can be found. The point is isolated, bounded on three sides by steep bluffs from 100 to 120 feet high, and only approachable on the open side, to the north. The distance from Point Fermin to Point Hueneme is 60 miles, and Point Dume is about in the middle of this unlighted space. A light and fog-signal at Point Dume would be of great advantage to the coast steamers.

—— *Point Arguello, California.*—Point Arguello is 12 miles northwest of Point Conception. Immediately to its rear the land rises to a height of 3,000 feet. From that point the coast trends to the northward, and hence is not covered by the light from Point Conception. A light at this place would be of service, but no appropriation is asked therefor this year.

—— *Whaler's Island, California.*—On the 2d of November the President of the United States made this island a reservation for light-house purposes. It is a small island, about 500 feet from the main-land, and has a flat top about 70 feet above mean low tide. It is nearly round and about 160 feet in diameter. It is located in the Bay of San Luis Obispo,

1878

TWELFTH DISTRICT.

CALIFORNIA.

This district embraces all aids to navigation on the Pacific coast of the United States between the Mexican frontier and the southern boundary of Oregon, and includes the coast of California.

Inspector.—Commander A. T. Snell, United States Navy.

Engineer.—Lieut. Col. R. S. Williamson, Corps of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons	22
Light-ship	0
Fog-signals operated by steam or hot-air engines	10
Day or unlighted beacons	27
Buoys actually in position	29
Spare buoys for relief and to supply losses	29
Tender Shubrick, common to twelfth and thirteenth districts, used for inspector's and engineer's purposes	1

The numbers preceding the names of stations correspond with those of the "Light-house List of the Atlantic, Gulf, and Pacific Coasts of the United States," issued January 1, 1876.

LIGHT-HOUSES.

433. *Point Loma, entrance to San Diego Bay, sea-coast of California.*—The dwelling has been repaired, a portion of the wood-shed converted into a dwelling for the assistant keeper, and a barn built. The station is now in good condition.

447. *Point Hueneme, sea-coast of California.*—A close board fence, 10 feet high, has been erected to protect dwelling and out-houses from drifting sands. Portions of the reservation have been planted in grasses and shrubs, which by frequent irrigation have been made to grow.

448. *Santa Barbara, sea-coast of California.*—The structures at this station have been thoroughly renovated and repaired.

449. *Point Conception, sea-coast of California.*—The recommendation contained in the last annual report for an appropriation of $12,000 for repairing this station and building a keeper's dwelling to take the place of the present structure, which is in a very bad condition, is renewed.

450. *Piedras Blancas, sea-coast of California.*—A keeper's dwelling in progress at the date of last annual report has been completed.

451. *Point Pinos, sea-coast of California.*—The tower, parapet, and dwelling have been thoroughly repaired and renovated.

456. *Farallones, off San Francisco, California.*—The recommendations contained in the two last annual reports are repeated.

The dwelling at this station is very much out of repair, and much too small for the wants of a first-order station. It was built in 1855 out of rock quarried on the island, and is very damp. A substantial wooden structure is needed.

An appropriation of $12,000 for repairs and for building a new keeper's dwelling is asked.

457. *Point Bonita, sea-coast of California.*—Considerable work has been done in removing the rock-obstructions in front of the fog-signal. A survey has been made to determine the best method of improving and protecting that portion of the roadway, about midway between the tower and the fog-signal, where slides have occurred. The plan determined upon is to make a tunnel through the rock, to avoid the most dangerous part of the present roadway, and to cut away and properly slope the

TWELFTH DISTRICT.

This district extends from the boundary line between California and Mexico to the boundary line between California and Oregon, a distance of about 800 miles of coast line, and embraces all the aids to navigation on the seacoast, bays, and navigable rivers of California.

Inspector.—Lieut. Commander Thomas Perry, U. S. Navy.

Engineer.—Maj. William H. Heuer, Corps of Engineers, U. S. Army.

There are in this district:

Light-houses and lighted beacons	36
Light-ship in position	1
Day or unlighted beacons	48
Fog signals operated by steam	14
Fog signals operated by clockwork	7
Whistling buoys in position	12
Bell buoys in position	5
Other buoys in position	83
Steamer *Madroño,* buoy tender, and for supply and inspection	1
Steam launch *Hazel*	1

LIGHT-HOUSES.

785. *Point Loma, entrance to San Diego Bay, California.*—This new station was completed by the end of the last fiscal year, except the iron tower and the lens. The tower was received at the site on July 16, and was erected during August. The lens furnished was found to be too large for the space provided for it, therefore it was necessary to procure another, which reached the station in January, 1891, and was put in place during February. On March 23, the light was exhibited for the first time. It is of the third order, flashing red and white alternately, with twenty seconds' interval between the flashes. An electrical call-bell system was put up connecting the tower with both dwellings.

786. *Ballast Point, entrance to San Diego Bay, California.*—This station was completed by the end of the last fiscal year, but was not put in operation until August 5, 1890, on which date a fixed white light of the fifth order was exhibited. There is also a fog bell which will be struck by machinery every ten seconds during thick and foggy weather. Plank walks leading to the various buildings were laid.

—. *Deadman Island, at the outer end of the jetty on the east side of the entrance to San Pedro Harbor, California.*—The following recommendation which was made in the Board's last two annual reports is renewed:

> The port of San Pedro, or Wilmington, is the seaport for Los Angeles. An enormous quantity of coal, lumber, and general freight is brought into this little harbor, which was made by breakwaters constructed by the United States. Deeply laden schooners discharge inside the harbor, while deep-water ships discharge into lighters out in the bay. It is necessary to use the tides in getting into this harbor, as there

Pt. Loma - 2nd

1912 *Point Loma, Cal.*—The act of August 24, 1912, subsequent to the close of the fiscal year, appropriated $17,500 for establishing a fog signal and additional quarters at Point Loma Light Station, San Diego Harbor, Cal. Work was immediately commenced and by November 15, 1912, the fog-signal apparatus had been purchased and plans prepared for the construction of the necessary buildings. It is expected that the work will be completed by April, 1913.

OG SIGNAL AND ADDITIONAL QUARTERS, POINT LOMA LIGHT STATION, CAL. 1913

urpose.—A fog signal was established at this station to enable vessels to enter n Diego Bay during the fogs which occasionally prevail during the winter and ring months. The commerce of this harbor is rapidly increasing, a channel carrying 0 feet of water over the bar has recently been completed, and with the fog signal in eration, larger vessels are not delayed in entering or leaving port during fog. Fog nal placed in commission March 1, 1913.

Site.—The fog-signal building is located immediately behind the light tower on e southern end of Point Loma, compressed air being carried to sirens and horns aced in front of tower, directly on the point.

Structure.—The fog-signal building is a hollow terra cotta block structure 24 feet y 25 feet 6 inches outside, the walls inside and out cement plastered, floor concrete, of covered with diagonal red asbestos shingles.

Fog signal.—This apparatus consists of duplicate 6-inch automatic sirens blown by ompressed air. The compressing plant consists of duplicate 10 by 18 inch single-cting compressors, direct connected to 22-horsepower gasoline engines on the same eds. The sirens are located about 20 feet distant from the fog-signal building supported in a metal framework.

Quarters.—Additional quarters for one keeper have been built. They consist of a wo story and basement dwelling of hollow terra cotta block, the walls plastered with cement plaster outside, and with hard wall plaster inside; the roof covered with diagonal red asbestos shingles. The first floor consists of inclosed porch, hall, living room, dining room, kitchen, and laundry, and the second floor has three bedrooms and bath.

Cost.—The fog signal was established and quarters constructed under the act of August 24, 1912, appropriating $17,500. The total cost was $17,464.48. The work was performed by hired labor, and was commenced in December, 1912, and completed June 25, 1913.

OH

BRENNAN, JOE

Interview by Edgar Hastings, June 6, 1957

My father was born in Merrickville, Canada, on November 4, 1847, and my mother, Mary Agnes Flinn, was born in Wales in 1859. My dad came out to San Francisco in the early 1870's and met my mother in Oakland where they were married in 1879. He worked as a carpenter for a number of years and in the early 1880's he went into the lighthouse service. The first lighthouse job he had was at Pt. Arena, north of San Francisco.

My family came to San Diego in February, 1892, on the old Santa Rosa steamer. We came in at the old 5th Street dock. We got an old carriage from Levi and went over to the lighthouse at Pt. Loma where my dad had been assigned from Pt. Arena. They had just abandoned the top lighthouse and this was just after it had moved down. They moved down in about 1891 and we came in 1892. It was all new and we were the second people to live there. Old man Israel (Robert Decatur Israel) had been lighthouse keeper on the top and had moved down and was there for a little while. My dad relieved him at the new lighthouse.

My dad died in December, 1902, after we had been at the new lighthouse for about ten years. I stayed on at the lighthouse for several months as keeper until they got a new keeper.

We all scattered after my dad died. Some of the kids went up to the old St. Joseph's Hospital and Dick and I got jobs on boats down around the bay. We worked on dredges and tow boats and took care of the kids. While I stayed at the lighthouse, Dick went on a ship as a maintenance man. My mother died at Pt. Loma Lighthouse on April 10, 1895.

up over at the Steamship Wharf on the wrong wharf. We put a man ashore who walked around, got down on the other dock, so when we got even we could put a line ashore.

Billy Gerald's dad was keeper at Fort Rosecrans. Billy Gerald was stealing guano, which is bird dung, from the islands down the coast of Mexico, and was bringing it up here to unload it. They caught Billy, took him in to Ensenada, and arrested him. They put some soldiers on the end of the wharf and his boat was tied to the buoy out in the bay. At night they would put a lantern on it to see that everything was all right and to watch him. One night Billy took the lantern off the boat, very quietly moved it over and tied it onto the buoy, then hoisted sail and beat it. When he got up to San Diego, he wrote and asked them to send him his lantern.

In the latter part of 1900 Goddard had an old ship called the Lou, a famous old smuggling boat that had quite a record. In fact, when Captain Smith had her out smuggling Chinese, there was a young fellow on there and for some reason Smith got suspicious of him, killed him, and threw him overboard.

When Goddard got her we had to go down to Catalina Island to get a load of abalones that the Chinese had gathered up there and dried. We left in September of 1900 to go to Catalina and we got up off the southerly end of the island and couldn't make it around. Everytime we were just about ready to get around the point the wind would die down. Finally we got out the old whale boat and twenty foot oars and pulled it around. We got up to the cove where the Chinese had been gathering these abalones and drying them, and loaded them aboard. We started home with a pretty fair wind. When we got off Pt. Loma I wondered why we didn't go into port, but we just kept sailing back and forth until it got dark. After dark we went on in and dropped anchor down by the Santa Fe

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Winifred Davidson,
Point Loma, California.

April 2, 1925.

Dear Madam:

The Keepers of the Old Point Loma Lighthouse are listed below, filling gaps in your list.

1857 (San Diego)	John P.Keating		1,000
	Julius Semen	Ass't	650
1859 "	W.C.Wiley		800
	Julius Semen	"	500
1861	W.C.Price		800
	S.Fields	"	500
1863	W.C.Price		1,000
	S.Fields	"	625
1865	W.C.Price		800
	O.P.McAleer	"	625
1867	W.C.Price		1,000
	********** asst. not listed		
1871	Enos A.Wall	"	1,000
	Robert D.Isreal	"	600
1873	Robert D.Isreal		1,000
	Mary A.Isreal	"	625
1875	Robert D.Isreal		1,000
	Mary A.Isreal	"	625
1877	Robert D.Isreal		1,000
	Jos.Stone,	"	625
1879	Robert D.Isreal		1,000
	Jos. Stone	"	625
1881	R.D.Isreal		800
	Jos.Stone	"	600
1883	R.D.Isreal		800
	Victor H.Richet	"	600
1885	R.D.Isreal		800
	Phillip Savage	"	600
1887	R.D.Isreal		800
	David R.Splaine	"	600
1889	R.D. Isreal		800
	**********		
1891	R.D.Isreal		800
	Anderson	"	600

We regret we are unable to give you data for the year 1869.

Very truly yours,

Principal.

1869

365. *Point Loma, Cal.*—Small repairs are needed, and will be attended to this year at this station, on the cistern, gutters, and roof of kitchen. With the exception of these small needs the station is in good order and condition, and the light well kept.

366. *Santa Barbara, Cal.*—Small repairs are needed, and will be made at this station during the present year, to cellar windows, outhouse, and pipe to cistern. With these exceptions the buildings are in good condition. At the date of the last inspection the station was not in an entirely satisfactory condition, and the keeper was directed to carry out the regulations strictly.

367. *Point Conception, Cal.*—The cistern at this station has been rendered unserviceable, doubtless from the effects of the earthquake last year. The necessary steps have been taken to repair the cistern. The station, with this exception, is in good order and condition. The fog-bell machinery is in good order and condition.

368. *Point Pinos, Cal.*—The keeper's dwelling requires a new roof and one of the rooms needs replastering. This work would have been done some time since, but for the fact that the title to the site was under judicial investigation. The question of title having been recently decided by the court in California, the light can only be continued by a compromise with the claimants of the land upon which the buildings are erected, or by appraisal of a jury, as provided by the laws of the State.

Santa Cruz.—This structure will be a duplicate of that at Ediz Hook, W. T. It consists of a wooden dwelling on a brick foundation and cellar walls, and surmounted by a wooden tower for the lantern and lens. With the exception of the lantern and lens the building is complete. It was built by contract, for the sum of $4,350 in coin, the lantern and illuminating apparatus not being included in the contract, but furnished by the Board.

Point Año Nuevo, or vicinity.—The building of this station has been delayed by the extravagant sum demanded for a site. The proper position for the light has been a matter of much consideration, and it is doubtful which of the two, the island at Point Año Nuevo, or Pigeon Point, six miles distant, would best subserve the interests of navigation. But both points are upon the same rancho, (Punta del Año Nuevo,) and it was not possible to obtain a site at either upon such terms as the Board could agree to. Finally, the main land at Point Año Nuevo passed into the hands of other persons, who offered a site of twenty acres for the sum of $5,000 in currency, and this was accepted. Afterwards, an offer of the same amount was made for a site at Pigeon Point, still in the hands of the same owners, and this they have agreed to accept rather than have the light established at the other point. As soon as it is possible to have the title confirmed, there will be no delay in putting up the necessary structures, plans for which are already prepared. However, should there be promise of any considerable delay upon the part of the owners, in making a title to the United States, the buildings will be erected on the main land at Point Año Nuevo.

369. *Farrallon, off entrance to San Francisco, Cal.*—The condition of the tower and buildings at this isolated light station is good, and the light well kept. Small repairs were needed and have been made to the gutters, pipes to cistern, and the lantern. A new roof was put on the dwelling during the year.

370. *Point Bonita, Cal.*—This station only needs a new floor to the kitchen, and new steps to the front door, to render it in every respect in good order and condition. The light and fog-bell are well kept. The fog-bell machinery is in good repair and order.

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372. *Alcatraz,*
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BIOGRAPHICAL SKETCH OF ROBERT D. ISRAEL

For almost 20 years Robert Decatur Israel was the principal lighthouse keeper at the Old Point Loma Lighthouse. He started as the assistant keeper in 1871, and remained until the light went out of service in 1891. In between, he lived with his wife and family, fulfilling his responsibilities as keeper, husband, and father.

Robert Israel, the best known of the keepers at the Old Point Loma Lighthouse, was born in Pittsburgh, Pennsylvania on March 23, 1826. As a young man he joined the U. S. Army and fought in the Mexican-American War. In 1848, after being mustered out, he came to San Diego. At that time San Diego was just a small town of about 650 residents, and he soon became an active member of the community.

Before he became an assistant keeper in 1871, Israel's career was a mixture of private jobs and public offices. In the early '50s he was a policeman and jailer. When Indian troubles flared up in 1851, he joined Fitzgerald's Volunteers, commanded by Major G. B. Fitzgerald, U. S. Army. They set out to subdue Antonio Garra and his followers who were trying to regain land settled by the whites. Garra was later captured by Indians loyal to the Americans and sent to San Diego where he was tried and found guilty. Israel was in charge of the execution, and on January 10, 1852, carried out the hanging of Garra.

That same year Israel became a part of the community in a different sense. In August at the ripe age of 26, Robert married into one of San Diego's most prominent families. His bride was Senorita Maria Arcadia Alipas. She was 16 years old and a granddaughter of Juan Machado, reportedly one of the leatherjacket soldiers on the expedition that settled San Diego in 1769. Maria's mother was Juana de Dios Machado de Alipas, and her father was Damasio Alipas. After Alipas died in Mexico, Juana married Thomas Wrightington, one of the first Americans to settle in San Diego.

During their life together, Robert and Maria had four sons; Henry Clay, born February 11, 1862, Joseph Perry, born February 3, 1865 (died 1869), Robert Lincoln, born July 8, 1867, and a second Joseph Perry, born June 12, 1871. These boys all came of age on Point Loma, as children of the lighthouse keeper.

Robert's marriage to Maria established him socially in San Diego, and his many jobs and offices established him as a member of the business community. In partnership with John I Van Alst, he was a blacksmith and carriage maker, and with his brother Joseph, a contractor. In 1858, he was a justice of the peace, and in 1865, a school trustee. The census records for 1860 list his occupation as a farmer. He had 80 acres of improved land and 80 acres of unimproved land, together with 5 horses, 3 milk cows, 3 mules, and $500 worth of farm machinery. The cash value of his farm was listed at $1,000.

POINT LOMA LIGHT, California

ROSS HOLLAND AMERICA'S LIGHTHOUSES SINCE 1716

The first keeper of the Point Loma lighthouse also ran a shipyard and in 1857 launched the first vessel built in San Diego.

In later years another keeper of the Point Loma light supplemented his income---or at least his children did---by by signalling the pilot station when a ship needing a pilot neared the harbor.

They also signalled the shore whaling station when a ~~wa~~ whale was passing. The boys received proper remuneration for their "favors."

The Keeper's wife was also enterprising. She and the children gathered shells from the tide pool area below the lighthouse. With these shells they formed designs which they encased in frames decorated with other shells; they sold these shell pictures to tourists who visited the lighthouse to view the magnificent panorama of ocean, islands, mountain, countryside, and harbor.

Light House Ser. Bulletin
1930 – 1935 Vol #4

TO PRESERVE OLD POINT LOMA LIGHTHOUSE

Old Point Loma Lighthouse, the first lighthouse to be erected in southern California, is being preserved as a memorial and has just been repaired and painted. No longer used for lighthouse purposes, the old structure was set aside by President Wilson as a national monument and is now cared for through the War Department.

The old lighthouse was abandoned in 1891 for the reason that it was situated on a high ridge, 462 feet above the sea, where the light was often obscured by high fogs. A new iron skeleton tower was built on the extremity of the point with the light only 88 feet above the sea. The original lighthouse was built in 1855, but in recent years has sometimes erroneously been referred to as of Spanish origin, due largely to its architecture.

California is divided into two Coast Guard Districts. The Eleventh, in the southern half of the state, runs from the white 200,000 c.p. beam of Point Loma Light at the entrance to San Diego Bay to Arguello Light on the tip of Point Arguello with its white 1,100,000 c.p. light.

"Old Point Loma Light"—the first lighthouse to be erected in southern California as distinguished from the present Point Loma Light—is being preserved as a memorial. Not used for lighthouse purposes since 1891, the old tower was set aside by President Wilson as a national monument and is now cared for by the U.S. Park Service. The old tower was abandoned because it was situated 462 feet above the sea. At this unusual height, the light was often obscured by high fogs. The current iron skeleton tower was built on the extremity of the point with the light only 88 feet above the sea. Although the original Old Point Loma lighthouse was built in 1855, a romantic error attributes it to Spanish origin. When it was built, some old Spanish tiles were used in its cellar floorings. That is the full scope of its Latin ancestry. Talk has it that the Spanish

E. Statement of Historic Contexts

Discuss each historic context listed in Section B.

MARITIME TRANSPORTATION IN CALIFORNIA
1840-1940

The history of California is intertwined with its history of maritime exploration, settlement, and commerce. From its European discovery by the Spaniards, Califo and its history have been strongly influenced by its strategic location on the Pacific Ocean. Because of the 19th century's dependence on ships and water transport, California, by its very location, became the crossroads for man's conquest of new frontiers. California's maritime heritage is the record of its contribution to the opening up of the Pacific coast and, indeed, all of the lands of the Pacific Ocean.[1]

The rise to world prominence in less than a century attests to California's phenomenal opportunities and resources. Much of this rapid development can be directly attributed to the state's early dependence on, and its exploitation of, maritime resour and maritime commerce. This is no less remarkable when one considers that California's shoreline is, in many ways, very inhospitable. For the early settlers the most noticeable difference between the East Coast and the coast of California (and indeed of the entire West Coast) was the latter's lack of natural harbors. In the 1300 miles between the Mexican and Canadian borders, only San Diego, San Francisco, and the Strait of Juan de Fuca provided natural harbors sufficient to ride out a winter storm.[2] In addition, the rocky, irregular coastline abounded with unmarked dangers in the form of reefs, ledges, offshore rocks, islands, and spectacularly tall points of land jutting far out into the surrounding ocean. Navigation was further hampered by frequent ocean fogs (especially in the summer) and destructive Pacific winter storms. The fact that California has spawned three major world seaports and a host of minor ones in spite of these shortcomings, attests to the extraordinary dynamism that has occurred in the state in such a relatively short period of time.

The Pre-American Period

The first residents to utilize the sea in California were the Native Americans. The sea provided a bounty of food for the coastal tribes, and a means of transportation for the fledgling Paleo-Indian trading economy. A number of trading port villages served to exchange goods between coastal populations and those located further inland. In Southern California, for instance, traders would come to the coast from as far away a Arizona, bringing pottery and turquoise to exchange for steatite, abalone shell, asphaltum, and other coastal products.[3]

The Spanish period in California began in 1542 with the voyage of Juan Cabrillo. Cabrillo and his men sailed north from Navidad, Mexico in search of the fabled route to the Atlantic. The expedition reached as far north as the Russian River and then, after the captain's death, it continued northward to the present California-Oregon border.[4]

Thirty-five years later, an Englishman, Sir Francis Drake, landed in California as a result of his raids on the Spanish galleons from Manila to Mexico.[5]

In 1602, a second Spanish expedition led by Sebastian Vizcaino sought out safe harbors for the galleons. The Bay of Monterey was located and plans made to colonize it.[6] The lapse of 60 years between Cabrillo and Vizcaino, and of another 167 years later between Vizcaino and actual Spanish settlement of California, illustrates the isolation of, and the relatively low regard the leaders of New Spain had for, California.[7]

In 1812, the Spanish claim of exclusive right to settlement of California was challenged by the establishment of a Russian-fortified village on the Sonoma Coast north of San Francisco. Fort Ross, as it was called, had several purposes. It was intended

[X] See continuation sheet

to produce food not only for itself but for the company's operation in Alaska; to serve as a headquarters for the hunting of sea otter in Northern California waters; and also to serve as a possible station of trade with the Spanish California settlements.[8] The venture was not a successful one and was abandoned in 1841.

The Mexican period in California (1821-1848) saw that country even less able than Spain to concern itself seriously or effectively with the distant northern region. Throughout this period, American traders, trappers, and settlers were infiltrating the province. In 1821 the Mexican revolutionary regime opened the ports of San Diego and Monterey to foreigners. Soon yankee ships were anchored along the California coast exchanging New England manufactured goods for hide and tallow from the great California ranchos. Most of the hide depositories had inadequate harbors and the ship had to be anchored as much as three miles offshore. Sailors loaded the cargo into small off-shore boats by walking through the surf with the hides held over their heads. A hide would spoil if it got wet. The hide and tallow trade was significant not only because it influenced the economic history of California and New England, but also because it increased the interest of Americans in a distant region with great potential.[9]

Throughout the Mexican period, both the United States and Great Britain had been vying for acquisition of a port in California. The United States felt it imperative to have a foothold on the Pacific to help preserve its westward expanding territory. A Pacific squadron of the Navy had been established in 1821, but with no port to base it in. Mexico steadfastly refused to relinquish any port territory to England or the U.S. Given this stalemate, both the British and the American navies were deployed off the Pacific Coast during the 1840's so as to deter each other from taking California by force. In 1840, the U.S. declared war on Mexico and during the course of the war American military forces occupied California. On June 7, Commodore Sloat sailed into Monterey Bay and raised the American flag with nary a shot being fired. The next day he sailed into the village of Yerba Buena (soon to be San Francisco) aboard the Portsmouth and proclaimed that settlement for the U.S. as well. By mid-July the American flag flew over every port city in California. With the U.S. Navy in control of the California coast and port cities, the chances of Mexican resistance to the occupation was extremely limited. Within 6 months all hostilities were over, and in May 1848 the Treaty of Guadalupe Hidalgo ceded California to the United States.[10] The Navy wasted little time establishing its influence in the area. A base was

established on Mare Island in San Francisco Bay and the fleet was expanded to eight ships.

The Gold Rush and the Clipper Ship

The discovery of gold near Sutter's Mill on January 24, 1848 set in motion the chain of events that became known as the Gold Rush. Starting in 1849 tens of thousands of people from all over the world poured into the mining fields of the Sierra Nevada. Although many later would arrive by land, the sea routes drew the heavy traffic in the first months of the great rush in the winter and early spring of 1849 because they were open year round. Before 1849 the Cape Horn route had been the most traveled one, but it covered a distance of about 18,000 nautical miles and took 5 to 8 months, and thus the Panama shortcut suddenly became more attractive to thousands who feared that all the gold might be gone before they could arrive. Early in 1848 the federal government had contracted with the newly formed Pacific Mail Steamship Company to deliver mail from New York to Panama and from Panama to Astoria. The first of these new ships, the California, left its dock in New York on October 8, 1848.[11] By the time it had gone around the Horn (the first American steamship to do so) and arrived in the Pacific port of Panama, word of the gold rush had spread and seven hundred eager gold seekers were clamoring for passage. On February 28, 1849 the California became the first American steamship to enter the Golden Gate. The Pacific Mail Steamship Line continued to provide regular mail and passenger service to San Diego, Monterey, San Francisco, and Astoria until 1867. During most of 1849 the average time from New York to San Francisco by this route was 3 to 5 months, though by 1850 increased service in the Pacific had reduced it to 6 to 8 weeks.[12]

Of the gold seekers who chose to travel around the Horn, many were organized in joint stock companies, both for the voyage and in the expectation of working together in mining operations after their arrival. These companies usually purchased old ships, which they supposed they could sell in California. Actually, most of these vessels joined the fleet of several hundred hulks that were abandoned to settle gradually into the mud of San Francisco Bay. The removal from service of the hundreds of obsolete old vessels, at the same time that the Gold Rush was stimulating the building of the clipper ships, made the early 1850's the golden age of the American merchant

marine.[13]

The new California clippers were designed to carry premium freight at maximum speed.[14] The clipper ships had been developed in 1844 for the tea trade with the Orient (the China clipper). However, soon after the Gold Rush the emphasis shifted to developing clippers for the California trade. Because no one knew how long the gold would last, everyone wanted to get there as soon as possible. Shipyards from New York to Maine competed in turning out the fastest and largest ships.[15] In 1851, the maiden voyage of the Flying Cloud set a record of 89 days from New York to San Francisco, a record that no other sailing ship has broken until 1989.[16]

Just as rapidly as the clippers ascended to the peak of dominance in maritime commerce, demand for them ceased as the gold fields worldwide declined. Overinvestment and overbuilding by eager shipbuilders resulted in major financial losses for the American shipbuilding industry. Further adding to their decline was the completion of the Panama Railroad over the isthmus. Serviced by steamship on both the Atlantic and Pacific, the railroad cut shipping time by about 60 days by even the fastest clippers.[17]

Ocean-Going Commerce

Sailing Ships

Following the Gold Rush period (1849-1855) there began a depression in the country in 1856. The discovery of the Comstock lode in 1859 bolstered the local California economy, but before the country could fully recover, it found itself immersed in the Civil War. Because of its isolation, California was relatively untouched by the war and was able to recover more quickly than the rest of the country. The completion of the transcontinental railroad in 1869 ended California's isolation. This shrunk coast-to-coast travel time from months to days. The building of the railroad from the West toward the East by the Central Pacific Railroad required massive shipments of machinery and iron rails from the Eastern United States using ships. It is ironic that the ships that brought the railroad equipment were, in effect, putting themselves out of business, as the railroad cut coast-to-coast shipping times so drastically that only the low priority, non-perishable, bulk cargoes--which could be transported more cheaply by ship, were left to the oceangoing trade.[18]

The main foreign exports from California during this period were

grain and lumber, while coal and iron products became the imports.[19] During and after the Gold Rush, cattle ranching had provided California's largest share of exportable products. A disastrous two-year drought from 1862 to 1864, however, decimated the herds and the industry. Beginning with the crop year 1866-1867, a generous rainfall made possible the discovery of the potentialities of dry land grain farming. It was an ideal crop for wide, flat valley lands in a time of distant markets and a sparse rural population with limited capital. For about 30 years, from the early 1860's until the Panic of 1893, wheat was California's largest and most profitable agricultural commodity.[20]

Grain farming was especially well suited to the Sacramento and San Joaquin Valleys, but it flourished in many coastal valleys as well. During this period, for instance, Ventura County was a prime wheat growing region and Port Hueneme was a prosperous grain moving port. Many agricultural artifacts from this period can be viewed today in the outdoor display area of the Ventura County Museum.

As California grew rapidly during the latter half of the 19th century, her needs for manufactured goods to support her burgeoning agricultural industry as well as her rapidly expanding population made her a major focal point of foreign trade. An abundance of surplus grain and other agricultural products developed. This in turn led to the need for even more machinery, cement, steel rails, coal, and guano to help grow and transport those farm products to market. These bulk cargoes were ideally suited to sailing ships, where economy rather than speed of shipment was most important. Hoping to stay competitive with the rapidly developing (and faster) steamship, the sailing ships of, first, iron, and later, steel, were designed to be larger than their clipper ship predecessors.[21] This class of sailing ship has become known by several names. "Down-Easters," or "Four-Posters" were common names as was the term, "Cape Horner" (as they were specifically designed to overcome the stormy conditions involved in sailing around Cape Horn). But the term that has persisted the longest and that conjures up the most romantic associations is that of the "Windjammer." Today, two of these tall-ship windjammers are preserved in California as floating museums: the Balclutha in San Francisco, and the Star of India in San Diego.

After California began producing large quantities of exportable grain, the question arose as to just who would carry and distribute this valuable product to the national and international market. After the Civil War was over, the American merchant marine had to begin

anew. Some of the famous clippers had been sunk by confederate raiders, along with most of the whaling fleet. Many fine ships had been sold abroad to lessen the risk of capture. The American ocean-going fleet was not rebuilt to any great degree. Entrepreneurial money went into foreign shipping or into the railroads and the development of the American West. From carrying 72% of our foreign trade in 1861, our country's share of deep sea commerce declined to 6% in 1898.[22] The bulk of our foreign trade was carried in foreign ships, primarily British.[23]

In 1881 when British domination of bulk cargo trade reached its peak, a total of 345 out of 559 ships docked in San Francisco that year were British. Only 149 were American. The other 65 were German, French, Norwegian or Italian.[24] The routing of the ships was highly efficient. Ships would load general cargo from England for Australia. From Newcastle, Australia a load of coal was shipped to San Francisco. There, a shipment of grain consigned to Liverpool, England, was loaded. As the grain was in transit it was sold to bidders in England, Germany, Belgium or Holland for delivery to the highest bidder. California's wheat was in great demand in Europe during this era as its hard texture allowed it to be transported with little damage and yet be ground into a flour superior to that available elsewhere.[25]

Trans-Pacific Steamships

By 1890 the grain export trade in California had begun to wane as increased competition developed from other grain growing areas of the world. Increased irrigation in California also allowed other, more diversified crops, to be grown to satisfy the growing domestic market.[26] While maritime commerce with Europe therefore ebbed, a new maritime commerce was developing with the Orient. Trade pacts with China, Japan, and the Hawaiian Islands, as well as the development of Australia, New Zealand, the Philippines, and other Pacific Islands, led to a boom in trade across the Pacific Ocean. Because of its location, San Francisco rapidly became the hub of this Trans-Pacific maritime commerce.

From 1870 onward new developments in steamboat technology further stimulated Trans-Pacific trade. In the 1870's and 1880's, over 20 steamship lines serving the Pacific were founded. Six American companies were started--five of them based in San Francisco. The American lines thrived as they became extensions of the

transcontinental railroad, allowing shipments of mail and goods to places inaccessible by rail. Besides the pioneer Pacific Mail Steamship Company, which began trans-Pacific service in 1867, there was the Occidental & Oriental Steamship Company, founded in 1875 by the Central Pacific and Union Pacific Railroads.[27]

After a reciprocity treaty with the Hawaiian Islands was signed in 1876, the Oceanic Steamship Company was founded by the Spreckels family--pioneer sugar barons from the islands. The company also served Australia in competition with Pacific Mail. Other lines in operation included the Planters Line and the Matson Navigation Company.[28]

A number of international developments occurred in the 1890's that would spur further development of trans-Pacific maritime commerce. First, the United States annexed the Hawaiian Islands in 1897. Following the Spanish-American War in 1898, the U.S. acquired Guam and the Philippine Islands. In that same year, gold was discovered in Alaska, causing a new stampede of gold seekers. China and the U.S. signed new treaties, opening two new ports in Manchuria to world trade. Korea also became a U.S. trading partner. These events would assure a thriving trans-Pacific trade for San Francisco well into the 20th century. The era drew to a close during World War I when most of the ships of the Pacific coast were sold to the U.S. government, ending up as transports either across the Atlantic or in the English Channel.[29]

The first World War gave rise to the greatest shipbuilding spree the country had ever seen. The federal Emergency Fleet Corporation was formed to procure and build new ships for the war effort.[30] After the war was over, the government eventually sold off its fleet of new ships to private enterprise at bargain prices. Many shipping lines got their start or greatly expanded their operations in this manner. The Dollar Steamship Line, forerunner to the American President Lines, was able to begin around-the-world service. Likewise, Admiral-Orient Lines, predecessor to the American Mail Line, was able to expand its fleet quickly.[31]

The prosperity of the 1920's, stimulated by the Panama Canal and extensive development around the Pacific in Australia, New Zealand, Western Canada, Alaska, the Philippines, and Hawaii, created an atmosphere in which steamship travel reached an all-time high. Large, luxurious lines could be boarded from Los Angeles, San Diego, and San Francisco for major ports throughout the world. The late 20's saw another surge in building of trans-pacific liners as companies

endeavored to stay competitive. The new lines were larger and more luxurious than any before them.[32]

The 1930's marked the end of much of the shipping business. The continuing depression, the development of the automobile, the bus, and the Pullman railcar, all had their effect. Within the business, labor unrest created an uncertainty for sailing schedules. Trans-Pacific commerce continued but its days were numbered as World War II approached.

Coast-Wise Transport

In the late 19th century, San Francisco was the acknowledged center of ocean-going deep-water commerce on the West Coast. It was also the hub of coast-wise shipping interests as well. In 1879 the San Francisco Journal of Commerce stated the "The City of San Francisco with its magnificent harbor and central position...has no rival in commercial relations, and whatever other cities there are all pay her tribute. The coast-wise voyages, both north and south, all begin and end here."[33] There was no north-south rail connection in California until 1887 and many coastal communities were not connected by interior roads until well into the 20th century. Many communities and regions were therefore totally dependent on water transport and San Francisco for their entire livelihood. Many "ports" of the time were merely landings that serviced the surrounding agricultural or lumbering region. The San Francisco Journal of Commerce stated that "every little chute, roadstead, or landing sends its products to and receives its supplies from San Francisco, dealing with no other place and having no other connections."[34] For the most part, the north coast sent San Francisco its lumber, to be distributed elsewhere, and the south sent up its wool and produce. Fisheries and canneries were located everywhere and steamboat passenger service was provided throughout the coast as well. Most bulk cargo transport was done by sail as this was considerably cheaper than the faster but more expensive steamboat. In the summer months, northbound, coast-wise sailing craft stayed far offshore to avoid the strong southern current. Southbound sailings hugged the shoreline to take advantage of this same current. In the winter, this sailing pattern reversed itself as the southerly current became a northerly one.[35] Many lighthouses and fog signals were established in the late 19th and early 20th centuries to aid in the coast-wise maritime activity.

Lumber Schooners and Dog-Hole Ports

After 1850, due to the great demand for lumber, sawmills began springing up all along the Pacific Coast. This was especially true of the "Redwood Coast," roughly northern Marin County north to southern Oregon. Since there were no railroads or highways to the region for many years, the lumber was totally dependent on water transport to reach its markets. This presented a problem as the only suitable harbors were located at Humboldt Bay and Crescent City. The scenic northern California coast with its steep cliffs and picturesque coves, presented great obstacles in developing a sea-going economy. Nevertheless, in the latter half of the 19th century close to 100 landings and small ports were developed between Sonoma County and the Oregon border.[36] Most of these "dog-hole" ports were located in coves so narrow that, supposedly, only a dog could turn around in them (or, as another theory goes, coves so narrow that only an experienced "sea-dog" sailor would dare enter).[37] Many were too narrow to permit any docking at all. In these cases, ships were moored offshore and ingenious devices such as chutes, pulleys, and wires were used to load cargo. The shipping season was primarily in the summer months, as no captain wanted to find himself in a doghole port during a winter storm. If a storm should occur, the captain would often take the boat out to sea and "ride out" the storm. If he could not do this fast enough, the ship would inevitably crash against the rocks and reefs and be destroyed. Between 1865 and 1905, 184 shipwrecks occurred at the doghole ports.[38]

To meet the needs of these doghole ports, a specific type of ship--the lumber schooner--was developed. This was usually a small two-masted vessel fitted with fore and aft sails. Short in length, wide of beam, shallow in depth, and possessing great maneuverability, they were the answer to the many problems presented by the tiny doghole harbors. The smallest schooners usually carried a crew of four men while vessels of 100 tons had 6 or 7 on the payroll. As the 19th century waned, sailing schooners were gradually replaced with steam schooners which were then replaced by the railroad and truck. Ports became consolidated until gradually there were no doghole ports left. When lumber is transported by sea today, it is either by tug-towed barges or by huge diesel-powered tramps.[39] Many communities on the North Coast today got their start as dog-hole ports. Many more early dog-hole communities have vanished, however, as 20th century technology displaced their economic reason for being.

Passenger Steamships

Steam service was expanded in the latter quarter of the 19th century to provide fast, efficient passenger service to all areas of the coast. Prior to 1875, the very existence of the majority of coastal towns depended entirely on sail. Schooners brought in passengers, freight, and everything needed. They departed with lumber, wood products, farm produce, sometimes fish and game, and always passengers. As steam service became more available to more parts of the coast, passengers, produce, and livestock, were more likely to be transported by this faster means of transportation. Sailing ships maintained their place in coast-wise shipping, however, by providing inexpensive transport for durable, bulk cargo items. In 1879 the San Francisco Journal of Commerce noted that "canvas retains its supremacy in carrying trade in this part of the world."[40] It conceded, though, that passenger service was being increasingly met by steam. It also noted the steam service south of San Francisco was "more general, as many places to the north were never visited although there are more ports."[41]

The first steam-powered passenger service was provided during the Gold Rush by the aforementioned Pacific Mail Company line from Panama to Astoria, Oregon. While only three stops were made in California--San Diego, Monterey, and San Francisco--this was gradually expanded by this and other companies. The Pacific Mail changed its operation in 1867 to service only trans-Pacific routes.

The Pacific Coast Steamship Company came to dominate coast-wise passenger service in much the same way that the Southern Pacific came to dominate railroad interests.[42] The company had its beginning in 1860 when two partners purchased a barge and transported fresh water from a spring near Sausalito to ships anchored in San Francisco Bay. By 1872, the rapidly growing company had a capital stock of $2,000,000 and 18 vessels--15 of which were steam. The company became known for providing fast, efficient service, and for sailing up-to-date, well maintained vessels. In 1883, Sir Charles Russell, Chief Justice of England, remarked that "the Queen is a very fine and very fast ship. It is no exaggeration to say that expense and ingenuity have not been spared in making her the most luxurious boat I ever saw."[43] In 1913 the company's new $1,000,000 Congress was the largest coast-wise steamship ever built in America. Not all coast-wise travel was done in luxurious style, however. There were many ships that provided only cramped, austere quarters on boats that listed and swayed to every

stop along the way."

Steam passenger service along the California coast reached its peak in the 1890's. This has sometimes been called the "Golden Age of Steamship Travel." Fully 20 ports were served as general passenger and cargo stops. Many communities vied with one another to become great harbor ports capable of docking the largest steamers.[45]

The 20th century brought many changes to coast-wise steam service. In 1916, one year after coast-wise traffic reached its all-time high stimulated by the Panama-Pacific Exposition in San Francisco, Pacific Coast Steamship sold its passenger business to Pacific Alaska Navigation Company to become the newly formed Pacific Steamship Company. For the next 15 years, this company came to dominate coast-wise travel much as Pacific Coast Steamship had done before. Pacific Steamship closed operation in 1936, one of the last coast-wise steamship companies still operating. The depression proved to be the undoing of coast-wise service after lines were weakened by rate wars. Also contributing to their demise was the rise of alternate forms of transportation--the automobile, trucks, buses, and airplanes. The last regularly scheduled coast passenger service was operated by the McCormick Steamship Line. It discontinued service in 1941. Some of the ships became used as transport ships during World War II. Others became used for passenger service in South America.[46]

The Rise of Southern California

Through the 1870's, the main movement of population into California was confined to its north central parts. The Gold Rush, and the maritime economy it spawned, was primarily a northern phenomenon. San Francisco, with its outstanding Bay harbor, acted as the hub city for all maritime activity north and south of the Golden Gate. From the 1880's onward, however, southern California grew at a more rapid rate than did the north. If this growth was not immediately reflected in increased southern maritime activity, it can be most attributable to the lack of natural protected harbors between San Francisco and San Diego. In the 1890's, many southern coastal communities vied to become major ports by instigating massive harbor improvements. Piers, wharfs, and breakwaters were developed to enable usage by deep water steamers. Long piers remaining today from these efforts include those at Santa Monica (Port Los Angeles), San Luis Obispo (Port Harford), and Redondo Beach. Still, some towns had only

a limited number of passengers and a small amount of cargo, making large ship stops impractical. Companies used smaller ships on the routes which were called "narrow gauge" due to their limited access and appeal. Narrow gauge ports included those at Santa Cruz, Monterey, San Simeon, Cayucos, Lompoc, Gaviota, Ventura, Hueneme, San Pedro, and Newport Landing. "Major" southern ports included those at Port Harford (San Luis Obispo), Santa Barbara, Port Los Angeles (Santa Monica), Redondo, and San Diego.[47]

The fight for a deep water port for Los Angeles in the 1890's pitted the City government and the local business community against the all-powerful Southern Pacific Railroad. The railroad interests desired the harbor to be built at Santa Monica. They felt their ownership of the surrounding land would enable them to dominate the new port in much the same way that they dominated the Port of San Francisco. The local business and governmental community, however, wanted no part of Southern Pacific's control. Their preference was for a harbor at San Pedro. In 1898 Congress passed an appropriation for whatever site a board of Army Engineers' survey would select. When the board chose San Pedro, the railroad's Colin P. Huntington managed to secure two more years of delay. Nevertheless, in April 1899, the first bargeload of rock was dumped to begin construction of the breakwater at San Pedro. In later years the breakwater would be extended eastward to protect the combined harbor of San Pedro and Long Beach. The ports benefitted from the opening of the Panama Canal in 19xx, being that much closer to the Canal itself than was San Francisco. Los Angeles surpassed San Francisco as the major port on the West Coast in 1924.[48] The port enabled Los Angeles to grow and become the largest city in California and the second largest metropolitan area in the United States.

Fishing and Whaling

The American whaling fleet was decimated after the Civil War. The whaling industry was also troubled by depletion of the Atlantic schools, and by competition from "mineral" oil (i.e., kerosene) replacing whale oil. These problems were partly resolved by the development of the faster, more efficient "steam whalers" and the relocation of the whaling industry to San Francisco from New England. The first steam whaler, the Mary and Ellen was launched in 1879. Sailing the Pacific for six months, she was able to harvest a cargo

that would have taken a sailing whaler over two years to capture.[49] As demand for whale oil was replaced by demand for petroleum products, whalebone was actually increasing in value toward the end of the century. By 1910, however, the price of whalebone had dropped to 4 cents a pound, thus ending the industry that had made San Francisco the "whaling capital of America" for a quarter of a century.[50]

In the 1880's, great numbers of salmon were discovered along the shores of Alaska, providing the basis for an industry of significant size. Access to the salmon was limited to the summer months only. The processing and canning of the salmon was done at shore stations along the Alaska coast. As there were not enough permanent residents living in Alaska at that time, labor and supplies had to be "imported" from further down the coast. San Francisco became the center of the salmon packers trade. Each summer a fleet of large sailing ships--former clippers, whalers and windjammers outmoded by newer, usually steam, vessels--would leave their winter home in the Oakland Estuary for a season of Alaska canning. The ships served as barracks and floating warehouses, remaining anchored off-shore for the summer. As winter approached, the workers would sail home with a shipload's cargo of canned salmon.[51]

The industry was so prosperous that by the 1890's over a dozen firms were operating salmon fleets. In 1893, the operators formed a cooperative, the Alaska Packers Association, which grew to operate a fleet that sent an average of 80 ships a year to their 14 Alaska canneries. By 1930 the APA had completely converted to steamships.[52] Two remaining examples of ships from this period can be found in California today. Both the Balclutha, docked at the San Francisco waterfront, and the Star of India, docked at the San Diego Maritime Museum, served at least part of their distinguished nautical careers as packing boats for the Alaska salmon fleet.

Ferries on the Bay

In 1852 the Contra Costa Navigation Company established the Fleet Ferry service across San Francisco Bay. Eventually 30 routes would come into existence, all disappearing with the advent of the automobile and bridges.

As shortline railroads were built around the Bay, ferries became an integral part of the transportation system, moving people and cargo from one side of the Bay to the other. As the transcontinental

railroad operated by Central Pacific was extended to Oakland, it too inaugurated ferry service on to San Francisco for its arriving passengers. Ferryboats grew in size and number into the 1930's as some 50 million commuters a year were being carried across the Bay. The Golden Gate and Bay Bridges caused a rapid decline in ferryboat usage. The last commuter service from this era was discontinued in February, 1941.[53]

The first ferry service across San Diego Bay was provided to the newly built Hotel del Coronado in 1886. Other ferries were eventually added across the Bay. The last ferry service was discontinued in 1938. Development of the San Diego Naval Air Station on North Island in 1929 required expanded ferry service to connect it to the mainland. Three ferries serviced the island until they were replaced by bridge.[54]

California's history is inextricably intertwined with its maritime heritage. The state's early dependence on maritime transportation shaped the course of its development. Later, as other forms of transportation came to play an equal role in shaping its future, maritime resources and maritime transportation continued to be exploited to enhance the state's prosperity and importance in the national and international community. Although the scope of this historical context statement ends in 1940, it should be stated that maritime considerations continue to play a critical role in the on-going development of the state. Maritime influences will especially play an integral role in the unfolding story of California's involvement with the Pacific Rim nations.

This time period also saw a rapid turnover of architectural styles in the nation. Nearly every architectural fashion popular in this period is well represented somewhere in a California light station. The state is fortunate to have so many well preserved examples of these period styles remaining. Many structures in light stations have deteriorated or have been torn down over the years, but many remain--often in very good-to-excellent condition. Some remaining structures have been remodeled and some have been stripped of their distinguishing architectural features. But many more exist with a high (or intact) degree of architectural integrity remaining. Every effort should be taken to insure the preservation of these excellent examples of 19th and 20th century marine-related architecture.

The design of the individual buildings in the light stations was usually performed in Washington, D.C. California light stations therefore bear many similarities to light stations constructed elsewhere in the country. But there are often important differences to California light stations as well--both in terms of structure/materials, and in terms of design. To begin with, early lighthouse architects had to contend with geographical, climatic, and topographical features unique to California that were not present in the east. Through a process of trial and error, architects eventually found out what worked well in California and what did not. The first lighthouses, built in the 1850's, were typical Cape Cod structures with a tower rising through the center of the keeper's quarters. No attempt was made to adapt this Eastern design to the particularities of California.

These structures worked well where the geographical setting was similar to New England, as in Point Pinos near Monterey, or Battery Point near Crescent City. But they proved completely ineffective when placed high on a foggy headland as at Point Bonita and Point Loma, or when constructed on the sinking sands of Humboldt Bay. by the 1870's, light station "types" were beginning to evolve in California based on local factors. In addition to the Cape Cod type light, California also had several examples of "Middle Atlantic" lights--tall, slender towers located on flat coastal tables, with relatively little fog. Pigeon Point and Piedras Blancas are excellent examples of this type. The most uniquely California lights, however, were the squat, large-lens structures located on the sides of the major headlands. These land configurations were major hazards and, additionally, marked a turning point in coastal navigation. Powerful First and Second Order

Fresnel lenses were a necessity, but tall structures were not. Remaining examples of this type of light include Cape Mendocino, Point Reyes, Point Sur, and Point Bonita.

Another distinguishing characteristic of California light stations was the presence of landings. Landings were not needed as much in the densely settled East because of the presence of connecting inland roads. In the mid-19th century, California wilderness landings were often the only way to transport people into and out of a light station. Unfortunately, no intact examples of original landings remain in California.

Fog signals also played a greater role in California light stations than in most parts of the East. Many light stations, in fact, had their beginnings as fog signal stations. This was especially true of light stations in and around SF Bay. Remaining examples of fog station turned light station include Point Montara and Yerba Buena Island.

The Washington, D.C. Light House Service architect occasionally gave a purely "California" style to light station complexes. In the 1920's, for instance, the entire complexes at the Point Vicente and Anacapa Island light stations were designed in the locally popular Spanish Revival style. Both of these light stations remain today, their red tile roofs and stucco exteriors largely intact.

Light stations are almost always multi-part structures. The most prominent component of a light stations is, of course, the tower. This is the structure that holds the lens and elevates it to the desired focal plan above sea level. It may be attached to the keeper's dwelling or it may be freestanding. Perhaps the majority of people think of only the tower and keeper's house when they think of lighthouses. But there are many other ancillary structures and buildings in a light station, each playing its own significant role in the operation of the station. Fog signal buildings contained the warning apparatus utilized during fogs, oil storage buildings housed the fuel used in the lamps, barns housed animals and equipment , cisterns collected fresh water for domestic and steam fog signal use, and landings provided what for many is their only connection to the outside world. Not every light station today contains all the buildings that once made up the complex. Enough examples of a variety of building types, though, have survived at different stations to give a representation of the nature of a complete light station complex.

Light Towers

California's light stations utilize towers of various shapes and sizes. They are also constructed of a variety of materials. As has previously been mentioned, the height and shape of a tower was often due to specific locational requirements. Construction material varied, though, depending on such factors as technological innovation and availability of local material. The first ten lighthouses in California in the 1850's were built entirely of brick. The material for the first eight of these--interior lumber and exterior brick--was shipped around the Horn in 1853. The supply boat sunk at the mouth of the Columbia River before all the lighthouses were constructed, however. Supplies were then requisitioned from local sources, based on the original specifications. The combined brick, tapered tower/Cape Cod residence bore no relationship to California conditions or heritage. It was a transplant taken intact from the shore of New England and set down on the wild California coast. Remaining examples of this period include Point Pinos, Point Conception, Point Loma, and Battery Point (Crescent City).

Brick, as a construction material, was used far less often after the 1850's. Out of 26 towers constructed after 1856 only four were made of brick: Pigeon Point (1870), Point Arena (1870), Trinidad Head (1875), and Piedras Blancas (1875). These were each built with a double wall of brick containing an insulating air pocket in the middle. Unreinforced masonry structures are notoriously weak during earthquakes. Although both Piedras Blancas and Pigeon Point have ridden out countless earthquakes with nary a crack, Point Arena was damaged so badly in the 1906 quake that it had to be torn down.

The replacement Point Arena tower was constructed of reinforced concrete--the first light house in the country to be built with this innovative material. A chimney contractor was hired from SF to erect the structure. Its straight, thin tower looks, not surprisingly, like a tall factory chimney (albeit a cleaner, more graceful version). Many reinforced concrete structures were built across the country following the success of Point Arena. Most had a wider shaft than the Point Arena chimney, however. All reinforced concrete lighthouses have straight vertical sides; none has the tapering shaft so familiar with brick and metal plated towers. Remaining examples of free-standing cylindrical reinforced concrete towers include Los Angeles Harbor (1913), Point Vicente (1926), and Anacapa Island (1929). In the 1930's and 40's a number of square, reinforced concrete, modern

styled towers were constructed in Alaska. Port Hueneme lighthouse in California (1942) is identical to these Alaska series concrete towers.

The most common building material of California lighthouse towers was that of wood. In the 19th century California, especially northern California, abounded in high quality, inexpensive, and readily accessible redwood. A total of ten lighthouse towers were constructed entirely of wood. Most of these were attached to wooden keeper's dwellings, but some were freestanding. All used the occasion of wood to display elaborate carvings and scrollwork typical of late 19th century period styles. In 1874 Point Fermin, Port Hueneme (first) and East Brother all were built from identical plans for a fanciful Stick/Eastlake combination tower/residence. Point Fermin and East Brother remain today. In 1890 San Luis Obispo, Ballast Point, and Table Bluff were constructed from equally fanciful, pure Stick-style plans. Only San Luis Obispo remains today. All wooden towers were, by necessity, square and not round structures.

Three lighthouse towers in California were constructed of prefabricated metal plates bolted together at the site. This allowed for fabrication at a distant location and a quick assembly once on the site. This was especially useful when dealing with isolated sites. Cape Mendocino (1868) and Point Reyes (1870) both employ iron plates. Point Montara (1929) employs steel plates.

Two lighthouse towers are constructed of stone. Point Sur (1889) is made from stone quarried on the site. When this station was constructed, it was extremely isolated and Morro Rock, the island-like configuration it sits on, is entirely treeless. Stone became the logical choice for construction. St. George's Reef (1898) island tower is also made of stone. It was quarried on the mainland near Point St. George. Massive stone construction is perhaps the only durable material that would have stood up to the adverse climatic conditions found on this wave-swept, two-acre rock lying 6 miles offshore.

Many lighthouses do not partake of any particular architectural period style found in residential and commercial buildings. They are often designed as utilitarian structures consisting of shaft, lamp room, lens room, and roof. As such, the lighthouse tower is often the least ornamented, most austere structure in the light station complex. There are many exceptions to this rather general rule, however. Many towers were designed to be an integral part of the other buildings at the station. The many fanciful wooden structures, as previously mentioned, exhibit all the stylistic characteristics of the

residential Stick and Stick/Eastlake structures on the site. Likewise the base of the Piedras Blancas and Pigeon Point lighthouses contain many fine masonry Gothic elements and the stone tower at Point Sur is as fine an example of Richardsonian Romanesque as ever graced a midwestern train station.

The lens room of the tower contained the Fresnel lens that directed the light out to sea. The lenses were made of highly polished crystal and were each imported from France. Each light had its own particularly "trademark" signal and color. Lens sizes in California varied from the largest First Order down to the smaller Fifth Order. The largest orders were used to mark capes and headlands, and to provide important navigational information far out to sea. The smaller orders were used to announce the entrance to harbors and to warn against local hazards. Many Fresnel lenses have been replaced over the years with modern aero-beacons. However, some are still operating with the high degree of efficiency that they had when they were installed. Some are still in place, though not operating. Some have been retired to museums and still others are simply missing. And one, the Piedras Blancas lens, is on display at the town square at nearby Cambria--exposed to the elements and would-be marksmen. In addition to their historical significance, the Fresnel lens' multi-faceted crystal configurations make them works of art in themselves.

Dwellings

After the lighthouse tower, dwellings form the most commonly found building type found at a light station. Dwellings were built for the keeper and assistant keeper(s). Any number of sizes, styles, materials, and building configurations were used. Some were built as single family houses, some--particularly for the assistant keepers' families--were built as duplexes and triplexes. As the 19th century progressed into the 20th, the trend was toward providing single family homes for everyone. A 1913 government pamphlet describing the workings of the U.S. Lighthouse Service stressed that "recent practice favors detached houses, insuring greater privacy, and giving better opportunity for yards and gardens."

Some dwellings were attached to the light tower while others were freestanding. Generally speaking, there was a tendency to detach towers and houses at the larger lights to lessen the potential for

fire. There was also a tendency in the East and Great Lakes to provide attached towers/dwellings to lessen the walking distances in the snow. In California, 20 lighthouses out of 39 were built as attached structures. All of the larger, more prominent lights were built as detached structures, however. Today, 14 of the attached tower-residences remain.

The keepers' dwellings were built in a variety of architectural styles in keeping with contemporary national architectural fashions. Nearly every residential style popular in the late 19th and early 20th century is represented somewhere in a California light station. Many residences were torn down in the early 1960's and replaced with modern ranch style houses. Many of the older homes remain, however, often with historic architectural features intact.

The first style of keeper's dwelling to be built in California was the aforementioned Cape Cod residence/tower built in the 1850's. Nine of these brick residences were built, three of which survive today: Point Loma, Point Pinos (Monterey), and Battery Point (Crescent City). The plan of this attached structure was lifted straight out of snowy New England. Those that survived are those that were placed in the most New England settings. Those that were replaced were those inappropriately located in unique California settings, i.e., Point Bonita (high on a foggy headland) or Humboldt Bay (located on sinking sand). Very few brick residences were built after this Cape Cod series of homes.

The next surge of lighthouse construction in California occurred in the postwar period, 1868 to 1875. Twelve light stations were built in this period. The predominant national residential architectural modes of the time were Victorian Gothic and Stick/Eastlake. Each is well represented in remaining dwellings in California light stations. Gothic keepers' quarters can be found at Yerba Buena Island and Point Montara. Both structures have the characteristic high, steep rooflines, multiple cross gables, elaborate gable trim, and massive corbeled chimneys. Curiously, the Yerba Buena Island residence, with its more simplified, symmetrical facade, is more characteristic of the Gothic Revival style found in the East at a slightly earlier time period (1830-1860). This building is perhaps the best preserved keeper's residence of any California light station and presently serves as the home of the Commanding Officer, 12th District Coast Guard. The keeper's house at Point Montara, on the other hand, is more representative of the later, more complicated Victorian Gothic style (1865-1890).

Other late 19th century keepers' quarters include the previously mentioned Stick and Stick/Eastlake style lighthouse/residence combinations and the Richardsonian Romanesque keepers' quarters and assistant keepers' quarters of the Point Sur light station. These latter structures were built of massive stone walls and had the characteristic Richardsonian semicircular arches.

The 20th century saw the construction of many Craftsman, Gambrel Roof, Neo-Classical, and Bungalow style keepers' quarters. Unfortunately, the only remaining examples from this period are the three substantial craftsman dwellings at the Point Cabrillo light station. Two light stations in Southern California--Point Vicente and Anacapa Island--were built in the prevailing Spanish Revival style of the 1920's and 30's. Both stations still contain dwellings of white stucco and red tile roofs.

Some lighthouses built on small islands contained bachelor living quarters inside the light tower. Family housing was provided on shore, but the man stayed in the tower when on duty. Mile Rock and St. George's Reef are examples of combined towers and bachelor residences.

Fog Signal Buildings

Fog was a continuing navigational problem along the California coast, especially in summer when the warm interior air pulls the colder ocean air toward the land. Some light stations, especially in and around San Francisco Bay, were actually fog stations before they were light stations. Fog signals were whistles, sirens, diaphragm horns, or diaphones. The equipment to run the fog signal was housed in a separate building. Most of the early fog signals were steam powered. Maintaining an adequate supply of water for the fog signal steam was sometimes a problem in summer-dry California.

The design of the fog station building shows a remarkable chronological consistency from the first structures built in the 1860's to those built in the early 20th century. They were utilitarian structures and their basic, unadorned appearance reflected their purpose. A few fog station buildings were designed in period styles, however. The fog signal building at San Luis Obispo was designed to relate to the nearby Stick style Victorian light tower/keeper's residence, and the fog signal building at Piedras Blancas is an unusual hybrid of Neo-Classical and Renaissance Revival motifs.

The layout of the fog signal building usually consisted of one large room containing the mechanical equipment and one or more side rooms containing the watch room, tack room, office, or store room. The most common arrangement was to have two smaller rooms, each flanking the central large room on opposite sides. double doors were always found on the front facade, and sometimes on the rear as well. The interior of the central room always contained an open-beam ceiling with exposed trusses. The fog signal buildings were always one-story, peaked roof structures and they were constructed of brick or wood, or in rare instances, stone.

Oil House

In the mid-19th century, whale oil and lard oil were used as illuminants for the lens lamp. Toward the end of the century the much cheaper kerosene (then known as "mineral" oil) gradually came to replace other materials. Kerosene was, however, a volatile fuel. It was necessary to construct a separate, fireproof structure to store the oil drums. The oil houses were built close enough to the tower to be convenient, but far enough away to prevent hazards. Beginning in 1888 the Lighthouse Service began constructing oil houses for new lighthouses and for conversions of existing lighthouses. The conversion process went slowly and was not completed until 1917.

The oil house was usually a small, one-story, rectangular building measuring 12′ x 16′. It was of fireproof construction, usually brick or reinforced concrete, and usually had one iron door. In most of the U.S., the roofs were peaked to shed the snow. However, in California roofs were often flat because many were built of reinforced concrete. The design of oil houses was usually very plain and austere, reflecting the utilitarian nature of their use. Occasionally though, a very stylish oil house emerges, such as the Stick style building at San Luis Obispo.

Barns

Many California light stations were so isolated when first built that all fresh meat and produce consumed by the keepers' and assistant keepers' families had to be produced on site. As time went on and light stations became connected to the outside world by roads,

the need for on-site barns decreased. Most barns have not survived to the present day. Of those remaining, the barns at Point Sur and Point Cabrillo are among the best preserved.

Cisterns and Catch Basins

Assuring an adequate supply of fresh water was always a concern in summer-dry California. Fresh water was needed not only for domestic use but also for the steam-generated fog signals. Finding a water supply on a small rock island was especially difficult. To solve these problems, one or more cisterns with paved concrete catch basins were created. Sometimes the catch basin covered the entire site as at East Brother Island. Cisterns were usually constructed of brick and appeared above ground as domed "igloos." Many were covered with cement in later years. Among the best preserved light station water collection systems are those at Point Sur, Point Reyes, and San Luis Obispo.

Other Buildings

A variety of other structures and buildings were frequently found at light stations. Oftentimes, funicular and incline railways were constructed to haul supplies up from the landing. Neither rail systems nor landings have survived intact to the present day. Another building often found at light stations was the Carpenters'/Blacksmiths' Shop. This was especially important at the more isolated stations. Very few of these have survived. The shop at Point Sur is perhaps the best preserved. Other buildings include storage buildings, sheds (particularly coal sheds), storage buildings, and garages. These buildings vary considerably in their size, shape, and building material.

Physical Condition

California's light stations often occupy some of the most adverse weather locations in the state. Many of these complexes are constantly exposed to moisture and winds which test the endurance of their construction. Documentary descriptions of the stations found in

development includes the 5th order light established in Point Hueneme in 1874 which allowed the harbor to begin safely and consistently transporting agricultural products from the surrounding countryside. Soon, Ventura County had become developed as a prosperous grain growing region. The establishment of a light station at San Luis Obispo in 1890 likewise aided in the safe movement of ships in and out of Port Harford. This was instrumental in expanding the economy of San Luis Obispo and in promoting the settlement of the entire county.

Smaller lights established on the north coast were instrumental in allowing that region to develop its lumbering economy. As California grew, the demand for lumber increased. There was no way to get most of the lumber out except by sea. This was complicated by the fact that no suitable harbors existed between Sonoma County and Humboldt Bay. Close to 100 impromptu "doghole" ports were established in Sonoma, Mendocino, and Humboldt Counties. The north coast sea route of the lumber schooners was difficult because of the doghole ports and because the sea route hugged the rocky shoreline. Smaller light stations such as Point Cabrillo, Trinidad, and Punta Gorda greatly aided this effort.

The Panama Canal greatly increased the shipping potential of California. The Anacapa Island Light Station was established in 1912 to aid the expected increase of ships headed through the Santa Barbara Channel between San Francisco and Panama. A larger, more permanent lighthouse tower was erected there in 1931.

The Panama Canal very much aided the development of the southern California ports. Los Angeles overtook San Francisco as the leading port city on the west coast in 1924. The Lighthouse Harbor light (1913), Point Fermin light (1874), and the Point Vicente light (1926) all helped Los Angeles Harbor develop into the maritime commercial giant that it is today.

In sum, the establishment of light stations on the coast of California greatly aided the navigational requirements of maritime commerce and transport. Many facets of the state's economy and many geographical areas within the state could not have been developed as they were without the light stations that made safe maritime transport possible.

of a lighthouse tower. Also, excluded by this requirement would be the various "lens lanterns" that were hung on, or attached to, structures whose primary function concerned other areas of navigational aid. For instance, the Lime Point Fog Signal Station located underneath the Golden Gate Bridge is an outstanding example of a 19th century fog signal station. The fact that it had a small lens lantern hung on one side of it (since replaced by modern lighting) should not place it in the category of "light station," however. The substantial structure requirement would also eliminate the more modern aero-beacons attached to tall poles frequently found as operating replacements for obsolete historical towers. Most of these are presently too modern to be considered for National Register status anyway. In short, future nominations should consider this restriction. No attempt is therefore made to strictly define the term "substantial," as eligible light station towers were designed in many shapes and sizes. However, most exclusions to the substantialness requirement will fall into one of the three aforementioned categories: post beams, lens lanterns, and modern aero-beacon poles.

The requirement that a light tower have been designed so as to accommodate a Fresnel lens serves much the same purpose as requiring substantial structures: it eliminates from consideration those minor lights that are not really light towers. Fresnel lenses used in California were of five sizes: First Order (the largest) to Fifth Order (the smallest). The larger lenses were used to mark headlands and major navigational turning points. The smaller lenses were used to mark harbor entrances and warn of local navigational hazards. Many lenses have been removed from their settings in towers. Others are still in existence and a few are still operating on a daily basis. Although not a requirement of registration, the presence of a Fresnel lens in its original setting greatly enhances the interpretive importance of a light station tower. Where these occur, they may partially off-set any alterations or remodeling that may have reduced the structure's historical architectural integrity.

The requirement that an eligible light station contain at least one associative historical building type is necessary to convey the relationship that existed between the light tower and the supporting small "community" needed to run and maintain it. Typically, these buildings included a keeper's dwelling, assistant keeper's dwelling(s), fog signal building, oil house, and various ancillary buildings (barn, sheds, etc.). Very few remaining light stations contain anywhere near the full complement of surviving buildings

necessary to run the historic station. The mix of remaining building types varies from station to station. The keepers' houses were often the best constructed buildings on the site (after the tower); but these, too, were often the first to be replaced as the whims of architectural fashion changed the relative desirability of different residential styles. While the remaining components of building types are always different, it is important to have at least one structure remaining to show that a station did in fact once exist in conjunction with the light. The presence of additional buildings is desirable from an interpretive standpoint and their presence could serve to partially off-set alterations to the more major components.

The light station tower and associative buildings and structures should be architecturally intact on the exterior, or they should possess a high degree of architectural integrity.