

The History *of* Dredging in San Diego Bay

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Scout Environmental

CMANC

San Diego

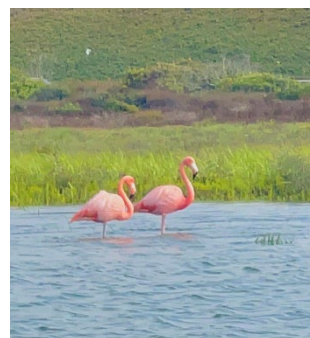
May 16, 2024





San Diego Bay

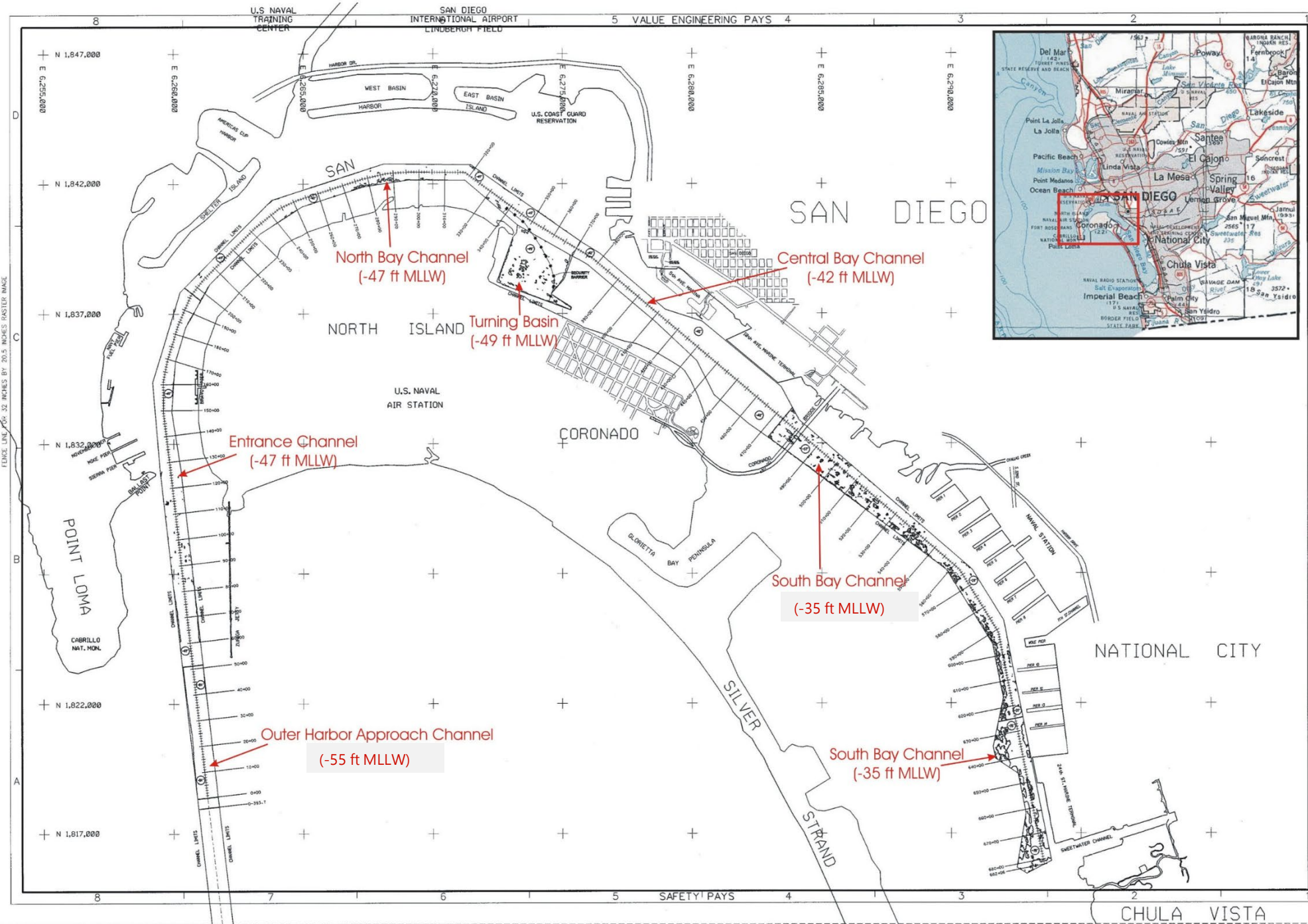
- San Diego Bay is natural harbor protected by Point Loma, Coronado and the Silver Strand, and the Coronado Islands in Mexico
- The Bay is a long crescent-shaped embayment approximately 12 miles in length and 1–2 miles wide and encompasses 22 square miles and 34 miles of waterfront
- The Bay has nearly 1,000 acres of tidal flats and 2,600 acres of eelgrass, which is 50% of all the eelgrass in Southern California and about 17% of the eelgrass in the state
- Bay uses are diverse and include commercial activities, military operations, recreational activities, and natural resources protection and enhancement
- Since the early 1900s, the Bay has been extensively dredged and filled
- The Bay is home to two Port terminals, three naval bases, shipyards and boatyards, a national wildlife refuge, a world-renowned commercial & sport fishing fleet, and two pink flamingos





Quick Tour of San Diego Bay

- Harbor Island
- Shelter Island
- Naval Base Point Loma
- USCG Mooring Ballast Point
- Point Loma
- Zuniga Jetty
- Naval Amphibious Base
- Homeport Island
- The Silver Strand
- Ponds 10 & 11 Restoration Site
- Otay River
- USCG Station San Diego
- NAS North Island Carrier Base
- Switzer Creek
- San Diego Shipyards
- Chollas Creek
- Paleta Creek
- Naval Station San Diego
- Sweetwater Channel
- National City Marine Terminal
- Sweetwater Marsh
- Chula Vista Wildlife Reserve
- South Bay Salt Ponds
- 10th Avenue Marine Terminal



SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS	22 APRIL 2008	

SAN DIEGO HARBOR
SAN DIEGO, CALIFORNIA
SAN DIEGO HARBOR
BASE MAP
WITH 2007 CONTOURS

SCALE:	DESIGNED BY:	DATE APPROVED:
SHEET	DRAWN BY:	DATE
OF	CHECKED BY:	DATE
SHEETS	PREPARED UNDER THE DIRECTION OF:	DATE
	ACTING DISTRICT ENGINEER	CHEIE DESIGN BRANCH
	DISTRICT FILE NO.	SPEC. NO.
	FILE NAME: 5008_basemap.dgn	



Port of San Diego Granted Lands

34

miles of waterfront

2,404

acres of Port Tidelands

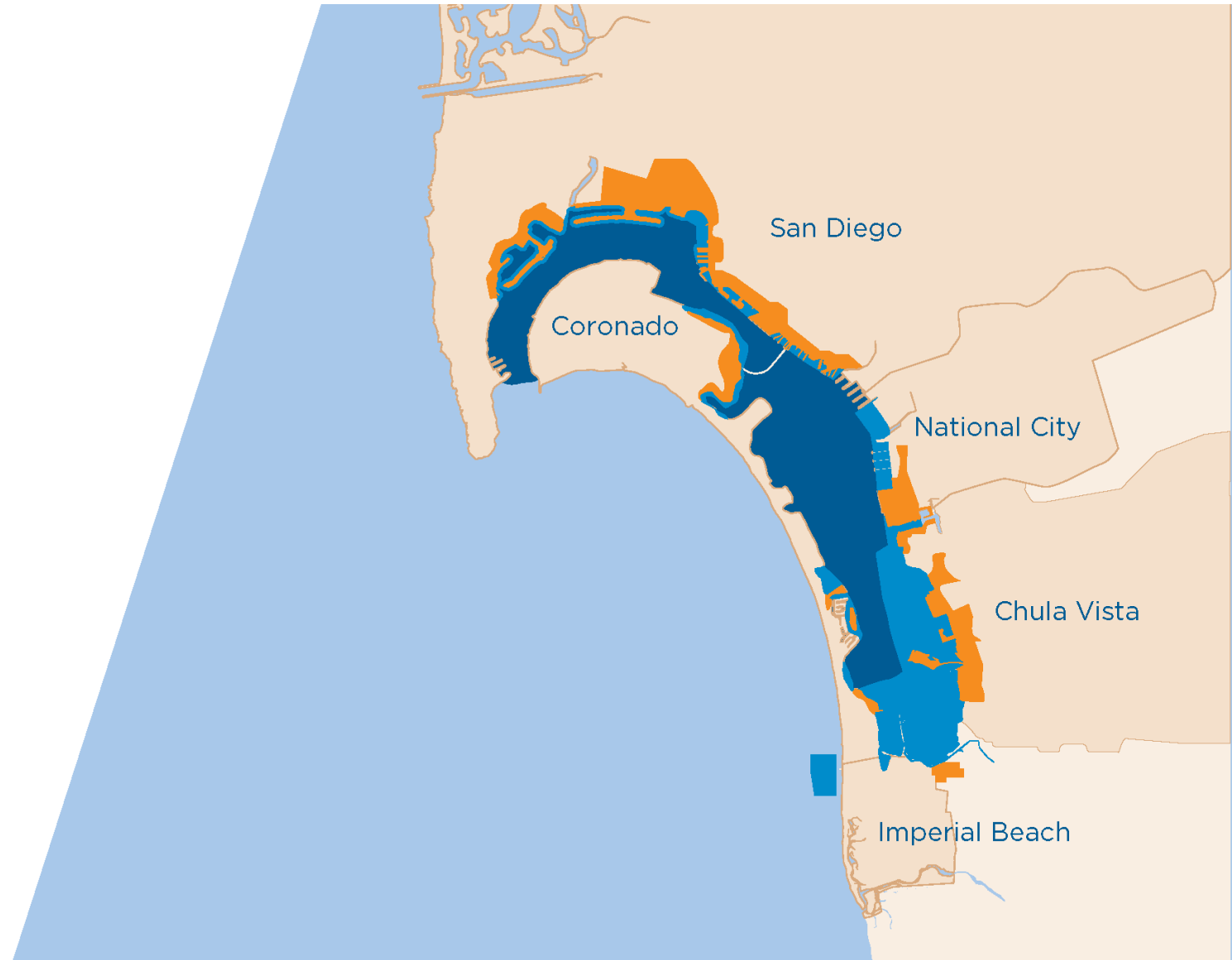
3,677

acres of Submerged Tidelands
prior to January 1, 2020

Approximately

8,300

acres of new Submerged Tidelands
(subject to survey) as of January 1, 2020





Significant Dates in San Diego Bay History

- **1542** – Explorer Juan Rodriguez Cabrillo lands at Point Loma
- **1835** – Richard Henry Dana arrives in San Diego onboard the *Pilgrim*
- **1850** – The State of California acquires title as trustee to Public Trust lands and waterways upon its admission into the Union (Public Trust Doctrine)
- **Mid-1800s** – 2,700 acres of saltmarsh and 4,000 acres of mudflats in the Bay
- **1876** – San Diego River permanently diverted to Mission Bay (aka False Bay)
- **1915** – The Panama Canal opens. San Diego hosts the Panama-California Exposition. This marks the beginning of San Diego as an international city.
- **1919** – Initial San Diego Harbor Commission and Harbor Department established
- **1922** – Naval Base San Diego established
- **1931** – Harbor dredging allows for a visit by the 888-foot carrier Saratoga



Significant Dates in San Diego Bay History

- **1950** – Filling of Shelter Island is complete
- **1961** – Harbor Island filled is complete
- **1961** – The navigation channel is dredged to -42 feet MLLW to accommodate the aircraft carrier Kitty Hawk
- **1962** – The California Legislature codified the Port Act, which creates the San Diego Unified Port District
- **1963** – Tenth Avenue Marine Terminal is complete
- **1968** – National City Marine Terminal is complete
- **1969** – San Diego-Coronado Bay Bridge is complete



Significant Dates in San Diego Bay History

- **1975** – Largest single dredging project in the history deepens San Diego Bay and places 8 million cy of sand from the harbor on the Silver Strand
- **1976** – California Coast Act is adopted. The Coastal Commission becomes a permanent agency with broad authority to regulate coastal development.
- **1998** – Over 7 million cy dredged to accommodate NIMITZ class nuclear-powered aircraft carriers at NAS North Island
- **2001** – 27-acre Homeport Island is created with 500,000 cy of fill pumped from NAS North Island to south of NAB
- **2013** – Shipyard sediment cleanup project initiated
- **2020** – Senate Bill 507 grants management of 8,300 additional acres of water area within San Diego Bay to the Port of San Diego



1894 Coastal Survey

LIGHTS

(The visibility of Lights is given for an elevation of 15 feet above the level of the sea)
F. signifies Flxed. Fl. Flash. Fls. Flashes. W. White. R. Red. Sec. Sector and v. varied

Name	Latitude	Longitude West from Greenwich	Character	Interval bet. Flashes	Color of Structure	Height above Sea	Visibility from Miles
Point Loma	32°39' 48"	117°14' 45"	7 ^h 48 ^m 50 ^s F. R. & W.	0 ^m 20 ^s	White	90 ft.	15
Ballast Point	32 41 04	117 14 11	7 48 567 F.W.		White	36	11

BUOYS

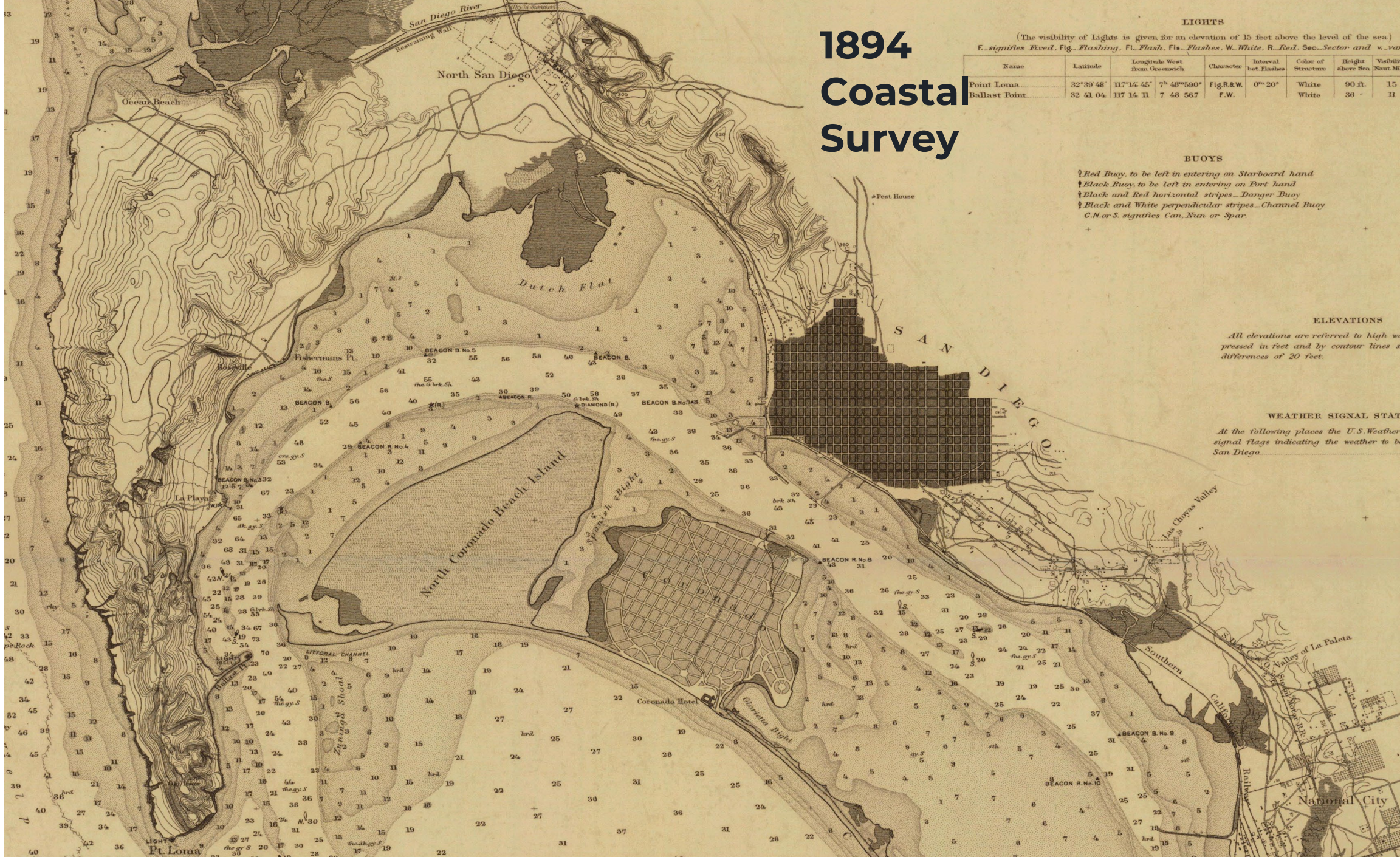
- ⚓ Red Buoy, to be left in entering on Starboard hand
- ⚓ Black Buoy, to be left in entering on Port hand
- ⚓ Black and Red horizontal stripes—Danger Buoy
- ⚓ Black and White perpendicular stripes—Channel Buoy
- C.N. or S. signifies Can. Nun or Spar.

ELEVATIONS

All elevations are referred to high water pressed in feet and by contour lines show differences of 20 feet.

WEATHER SIGNAL STATION

At the following places the U.S. Weather Signal flags indicating the weather to be expected.





1930 Coastal Survey

UNITED STATES
NAVY
SAN DIEGO



1876 San Diego Bay



Drawn by E. S. Glover and Published by Schneider & Knapp, San Diego.

Engraved according to Act of Congress, in the year 1845, by Schuchler & Knapp, in the Office of the Librarian of Congress, at Washington, D. C.

A. L. Beneroff & Co., Lithographers, San Francisco, Cal.

Showing the central portion of the city, with the actual (improvements) San Diego Bay and Peninsula, the Entrance to the Harbor, Point Loma, and the Los Coronados Islands, twenty miles distant in the Pacific Ocean.

BIRD'S EYE VIEW OF SAN DIEGO, CALIFORNIA

1876.

FROM THE NORTH-EAST, LOOKING SOUTH-WEST.

- | | | |
|-------------------------|-------------------------|------------------------------|
| 1. Presbyterian Church. | 5. Catholic Church. | 9. Bank of San Diego. |
| 2. Baptist Church. | 6. Public Schools. | 10. Commercial Bank. |
| 3. Methodist Church. | 7. Point Loma Seminary. | 11. City Hall. |
| 4. Episcopal Church. | 8. San Diego Academy. | 12. General Market Building. |

The County Seat of San Diego County and the proposed Terminus of the Texas Pacific Railroad. Present Population, about 3,000. A commercial town, publishes two newspapers, "San Diego Union" and "World," weekly and daily editions.

- | | | |
|-----------------------------------|------------------------------|--------------------------------------|
| 13. Honors' Hall. | 17. Linn House. | 21. Book Store of Schneider & Knapp. |
| 14. Telegraph Office. | 18. Bay View Hotel. | 22. San Diego Foundry. |
| 15. Heron House. | 19. Government Barracks. | 23. San Diego Flouring Mill. |
| 16. San Diego County Court House. | 20. San Diego Flouring Mill. | 24. City Brewery. |

64864
5493
1876
.96

U. S. Division
NOV 1972
Library of Congress



1887 San Diego Waterfront



CROCKER & CO. LITH. S. F.

- 1 HOTEL DEL CORONADO
- 2 BATH HOUSE
- 3 COAL HOUSE
- 4 MARINE WAYS
- 5 FERRY SLIP
- 6 SAN DIEGO FERRY SLIP
- 7 LUMBER YARDS
- 8 PLANKS MILL & MACHINERY SHED
- 9 ENGINE HOUSE
- 10 BRACK HOUSE
- 11 PLAZA
- 12 NURSERY
- 13 SHIPYARD
- 14 OSTICH FARM
- 15 PROSPECT PARK
- 16 E. S. BABCOCK JR. RES.
- 17 H. L. STORY'S
- 18 C. W. SMITH'S
- 19 PARKER DEARS
- 20 HOTEL JOSEPHINE
- 21 METHODIST CHURCH
- 22 SCHOOL HOUSE

BIRD'S EYE VIEW OF CORONADO BEACH, SAN DIEGO BAY AND CITY OF SAN DIEGO, CAL. 1/4 DISTANCE

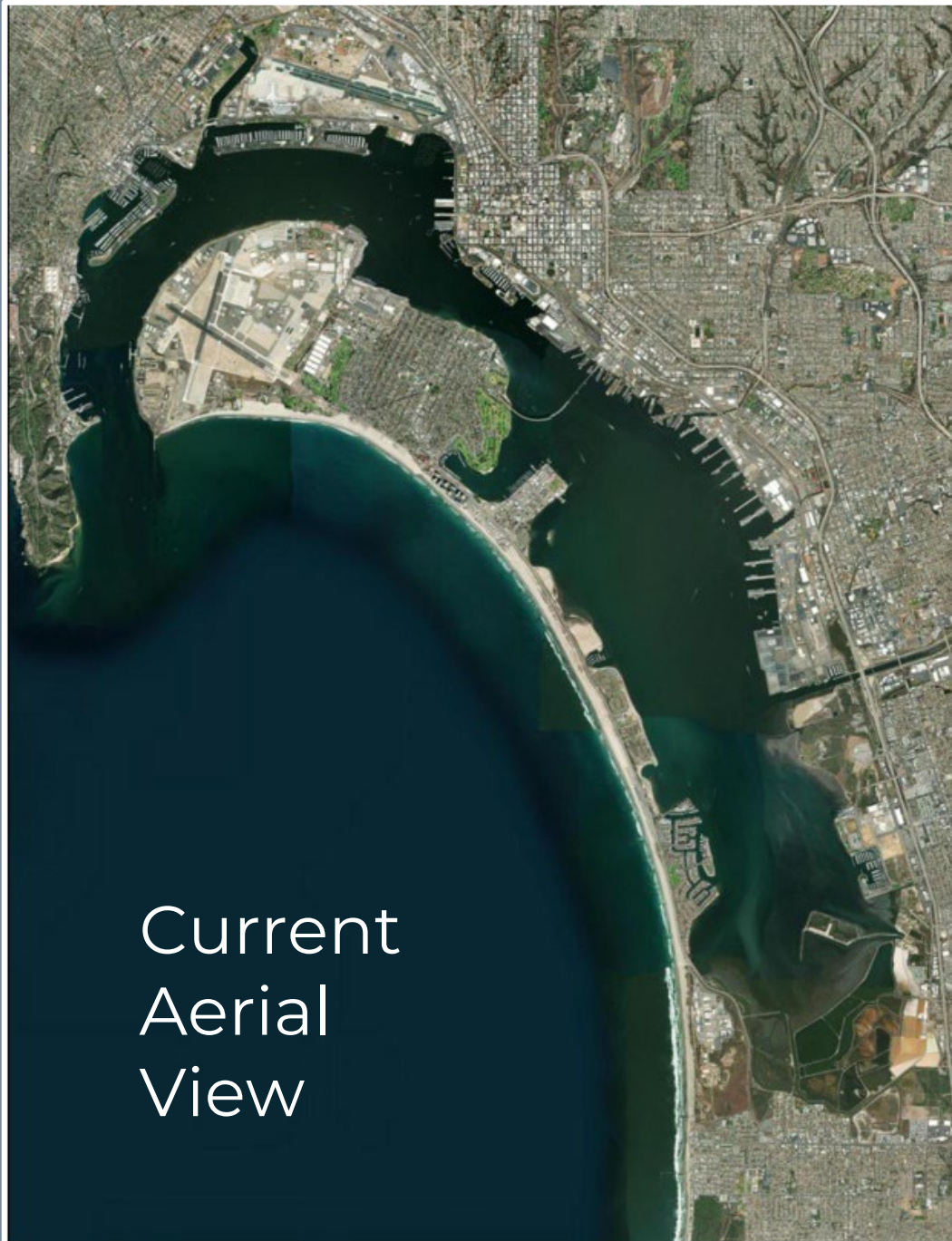
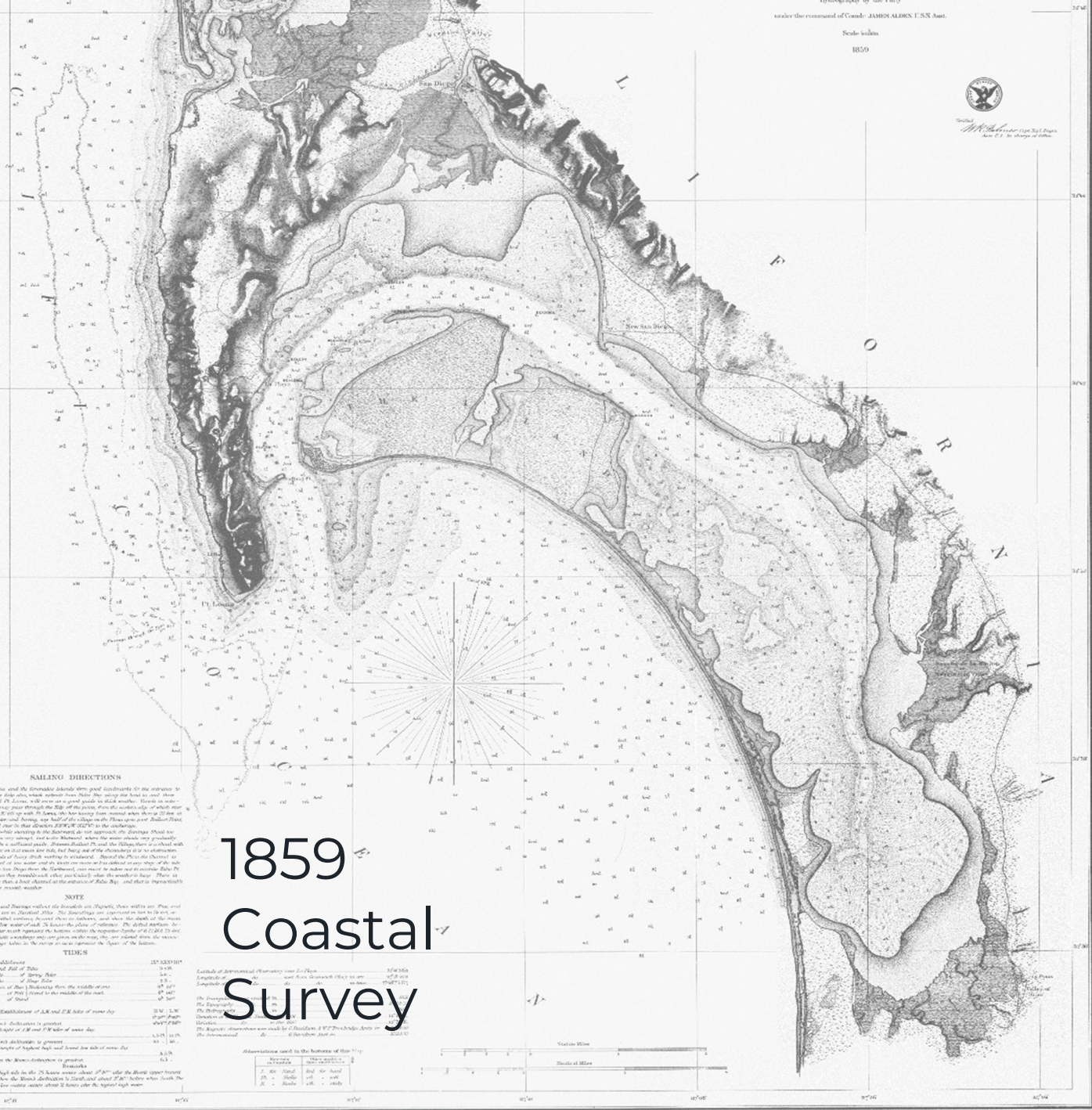
CORONADO BEACH COMPANY.

CAPITAL—ONE MILLION DOLLARS.

OFFICERS:

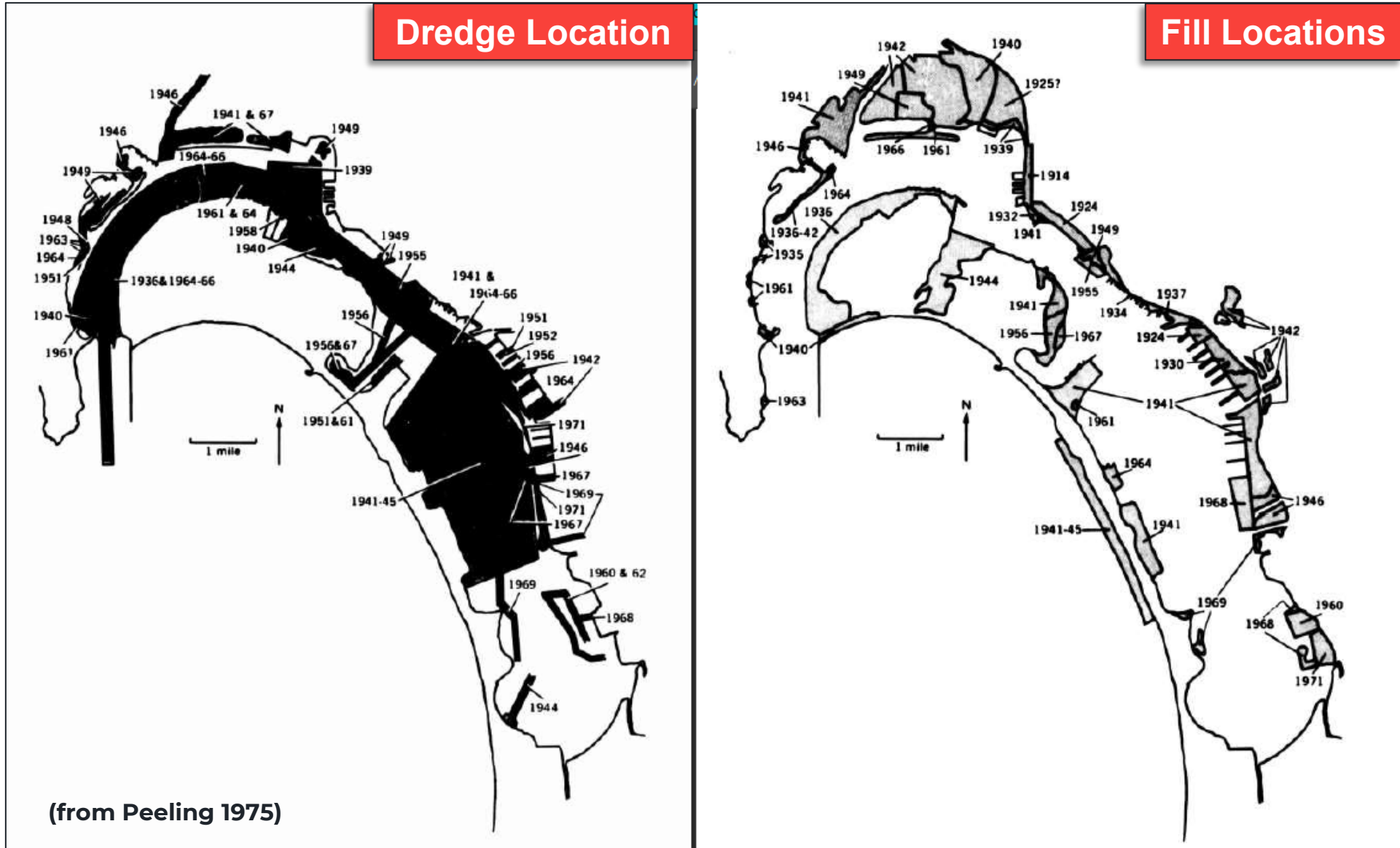
- E. S. BABCOCK JR. PRES.
- H. L. STORY VICE
- HT. NATL. BANK SAN DIEGO
- TRES.
- JOS. GOLLETT TERRE HAUTE IND.
- H. L. STORY SAN DIEGO
- H. SCHUSLER S. F.
- JACOB GRUNDKIRK SAN DIEGO

DIRECTORS:



Current Aerial View

San Diego Bay Dredge and Fill up to the early 1970s



The background features a light blue and white water ripple pattern. In the upper right corner, there are white geometric shapes: two parallel slanted lines and a partial circular arc.

San Diego Bay Early Waterfront

1887 San Diego Waterfront





1887 San Diego Waterfront





1890 Pacific Coast Steamship Wharf



*Pacific Coast Steamship Wharf
at the foot of 5th Street... about 1890.*

1890 Pacific Coast Steamship Wharf





ca. 1900 *San Diego Waterfront*





1905 *Western Lumber Company*



1907 *Tidal flats at the foot of 6th Street*





1912 *San Diego Harbor Dredging*



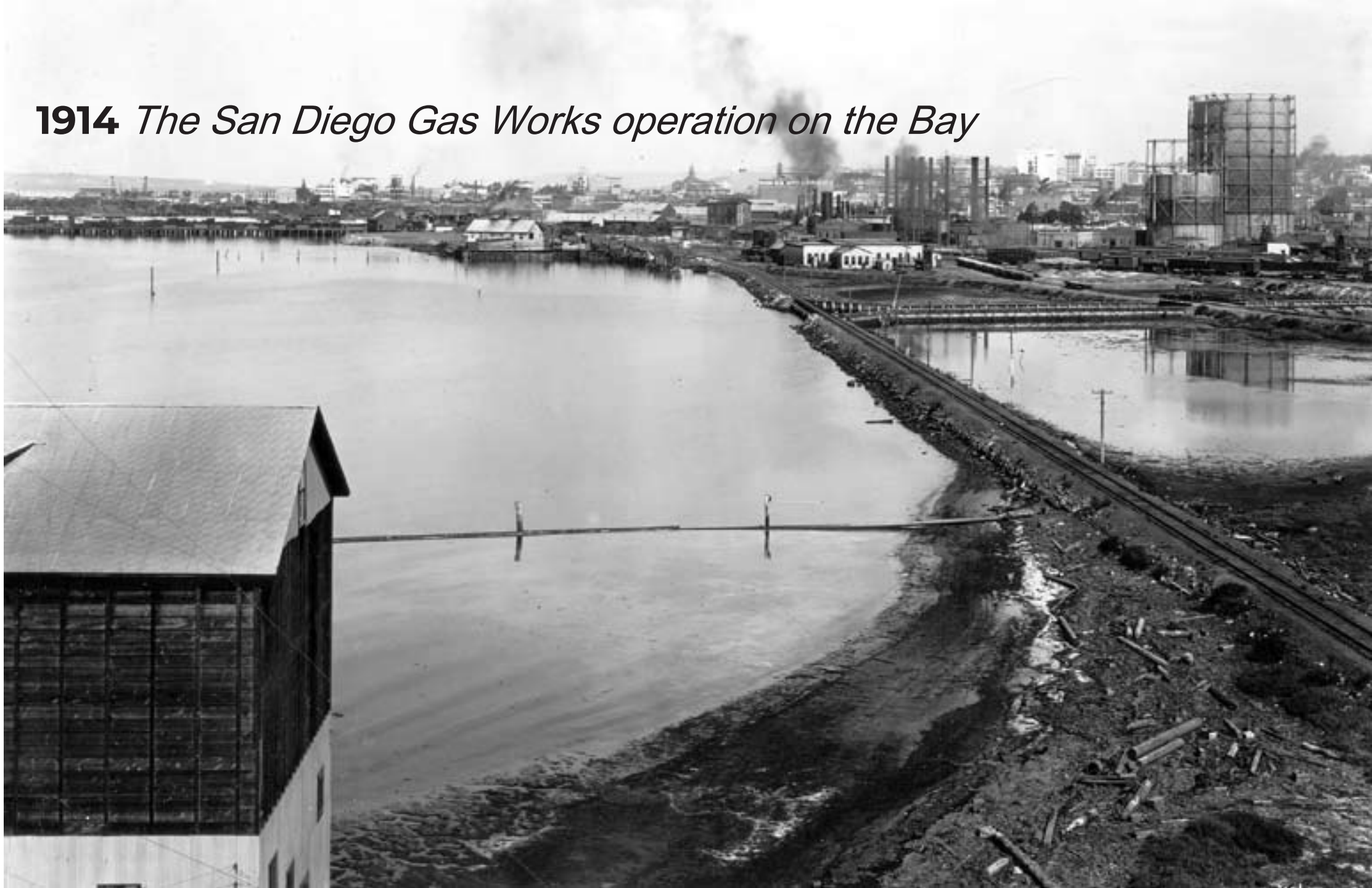


1913 *Creating Harbor Drive*



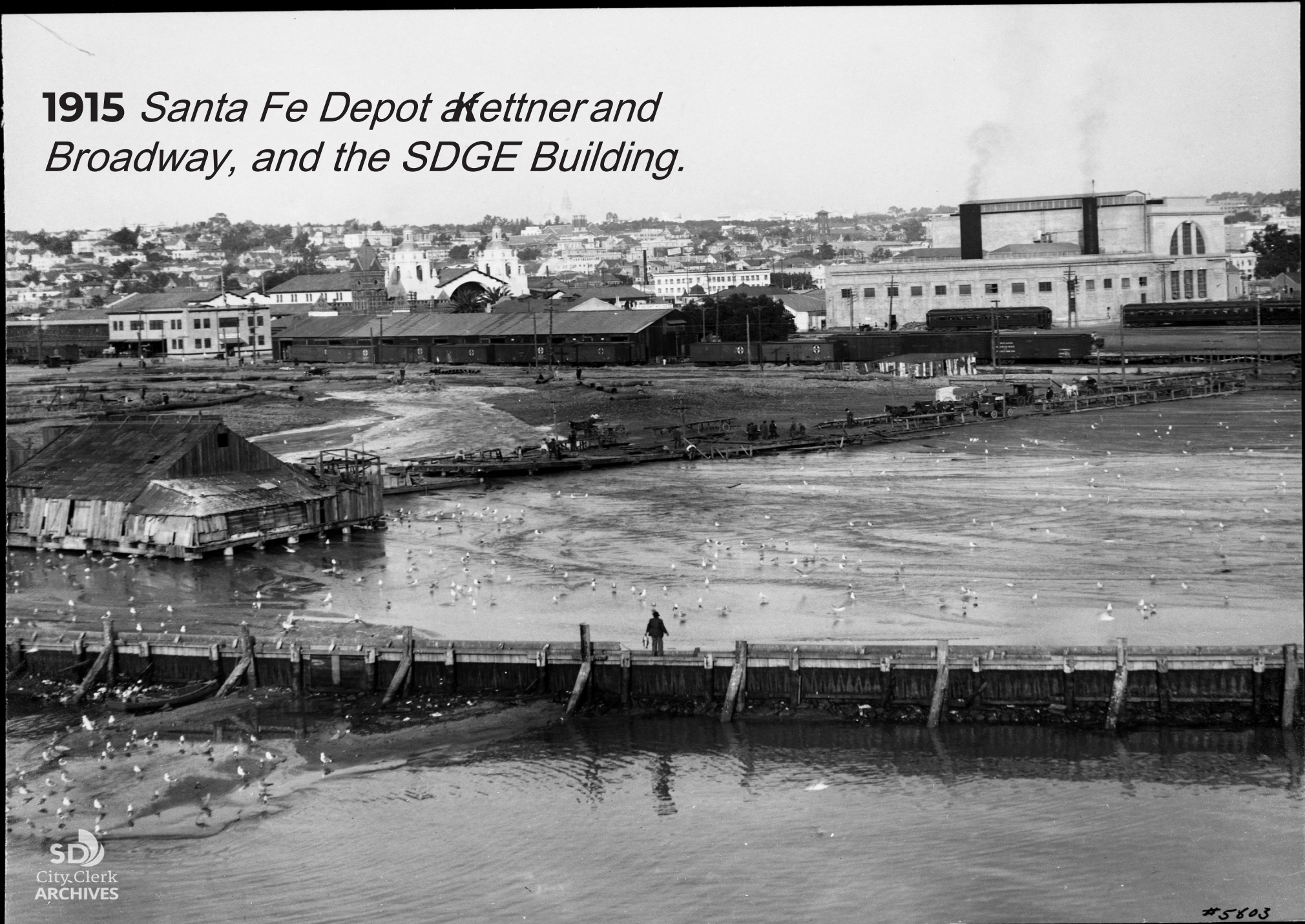


1914 *The San Diego Gas Works operation on the Bay*





*1915 Santa Fe Depot at Kettner and
Broadway, and the SDGE Building.*

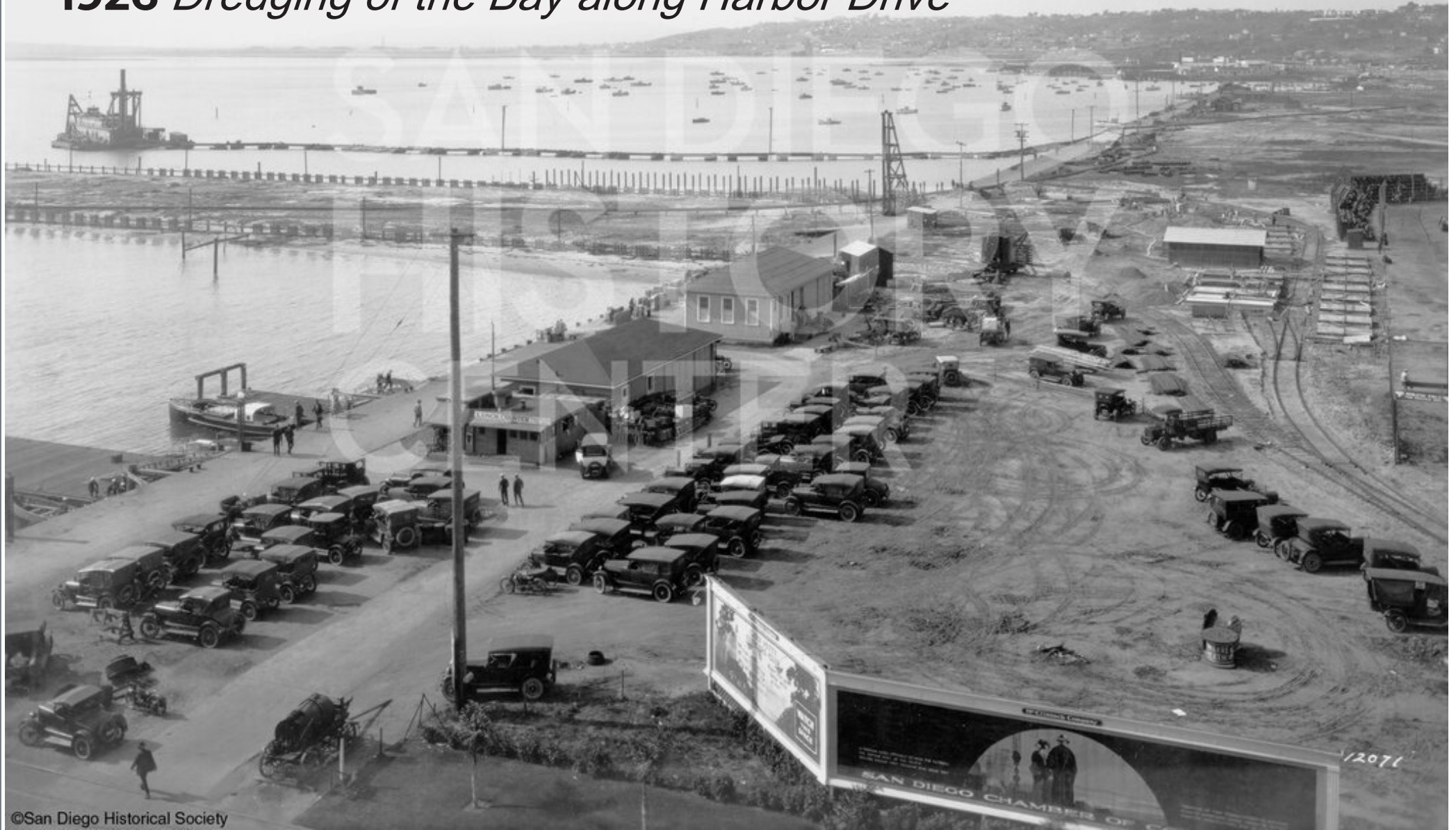




1924 *San Diego Bay Waterfront and the North Island*



1926 *Dredging of the Bay along Harbor Drive*





1929 *Dredging of the Bay*



" DREDGING OPERATIONS
SOUTH END OF MUNICIPAL AIR PORT
SAN DIEGO CALIF JAN 22 - 1929. "

#502.
PASSMORE
STUDIO
SAN DIEGO
CALIF.



1935 *San Diego Waterfront*



CITY OF
ARCHIVES



1936 San Diego Bay
looking northwest



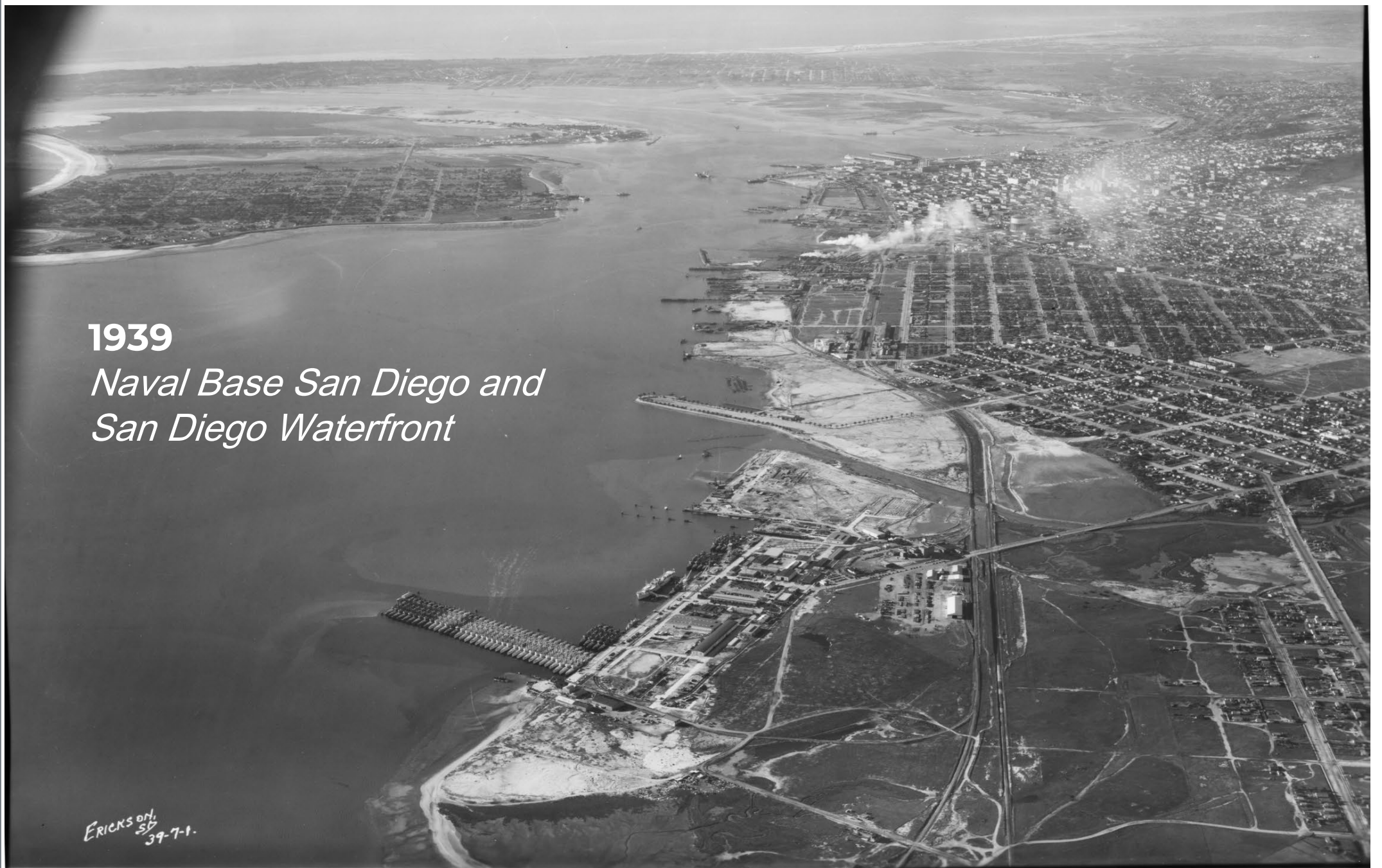
The background features a light blue and white water ripple pattern. In the upper right corner, there are white geometric shapes: two parallel slanted lines and a partial circular arc.

Building Naval Station San Diego



1937 *San Diego Harbor near foot of 32nd Street*





1939
*Naval Base San Diego and
San Diego Waterfront*

ERICKSON,
SD
39-7-1.

The background features a light blue and white wavy pattern resembling water ripples. In the upper right corner, there are white geometric shapes: two parallel slanted lines and a partial circular arc.

Dredge and Fill of Coronado Island

1918 *Naval Station North Island*





SD105046-9-24

1924 Naval Station North Island





1936 *Naval Station North Island Fill*





1943 *Filling Spanish Bight at NAS North Island*



SAN DIEGO BAY AREA
DEC 1943
UTILITY SQUADRON SEVEN
ALTITUDE 10000' LENS 6" F. 11
PILOT PHOTOGRAPHER
LT W T BRANHAM OR MILLER 11414

The background features a light blue and white wavy pattern resembling water ripples. In the upper right corner, there are white geometric shapes: two parallel slanted lines and a partial circular arc.

Building Shelter Island



1934 *Building Shelter Island*



1938 *Building Shelter Island*



ERICKSON
S.P.
38-75-1



1939 *Building Shelter Island*

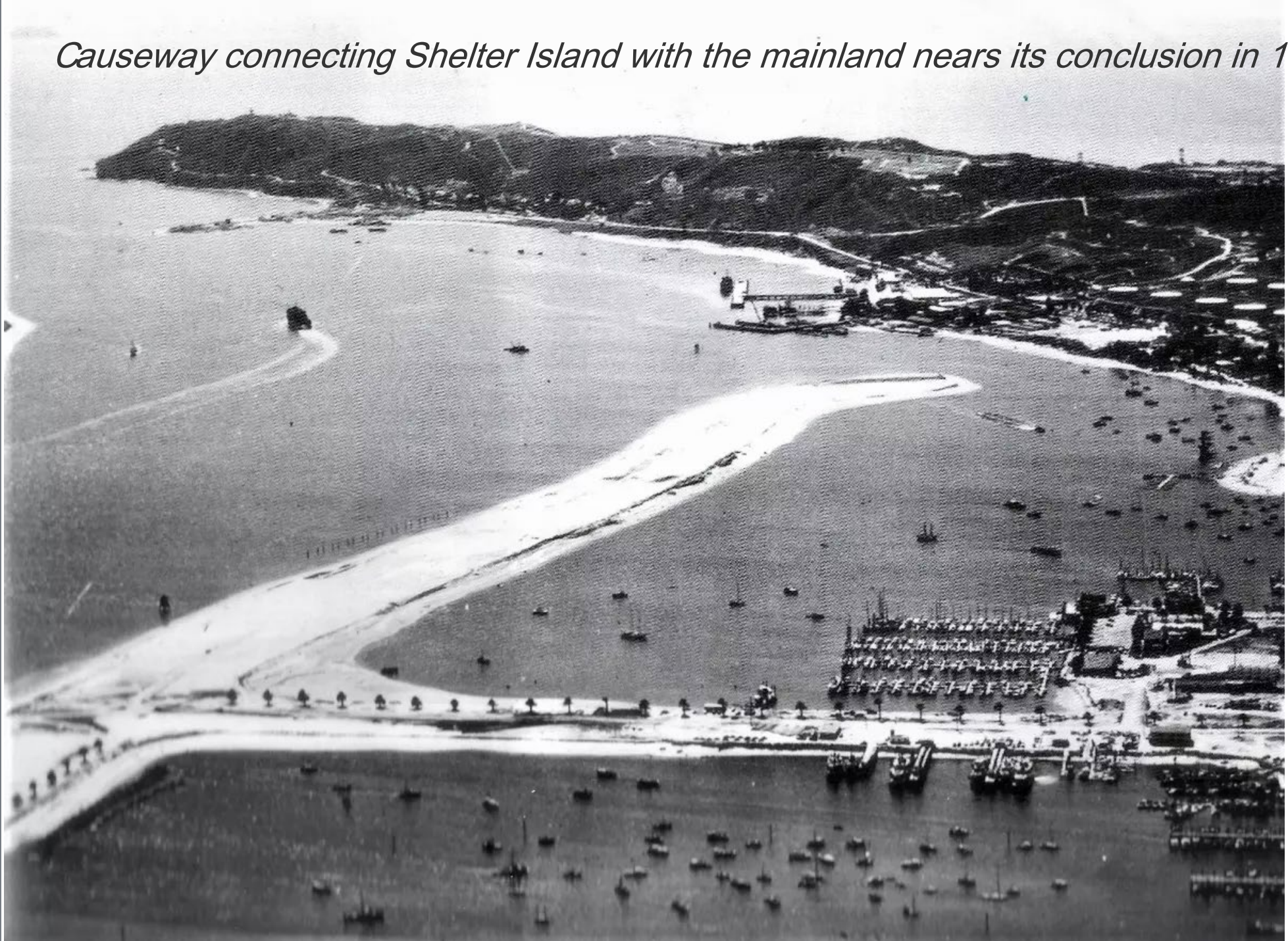
ERICKSON,
SD.
39-7-6.



1948 Shelter Island Drive under construction



Causeway connecting Shelter Island with the mainland nears its conclusion in 1950



The background features a light blue and white water ripple pattern. In the upper right corner, there are white geometric shapes: two parallel slanted lines and a partial circular arc.

Ferry Terminal at Foot of Market



1911 West Santa Fe Wharf at the foot of Market Street





1925 *Ferry Terminal at
the foot of Market Street*



1936 *Ferry Terminal at the foot of Market Street and fill area for new Police Station*



*1940 Ferry Terminal
at the foot of Market
Street and new Police
Station*

The background features a light blue and white water ripple pattern. In the upper right corner, there are white geometric shapes: two parallel slanted lines and a partial circular arc.

Building Lindbergh Field



*1939 Dredging San Diego Harbor
to build Lindbergh Field*

ERICKSON
39-24-5
SAN DIEGO



1940 *Dredging San Diego Harbor
around Lindbergh Field Airport*



*1941 Dredging San Diego Harbor
around Lindbergh Field Airport*



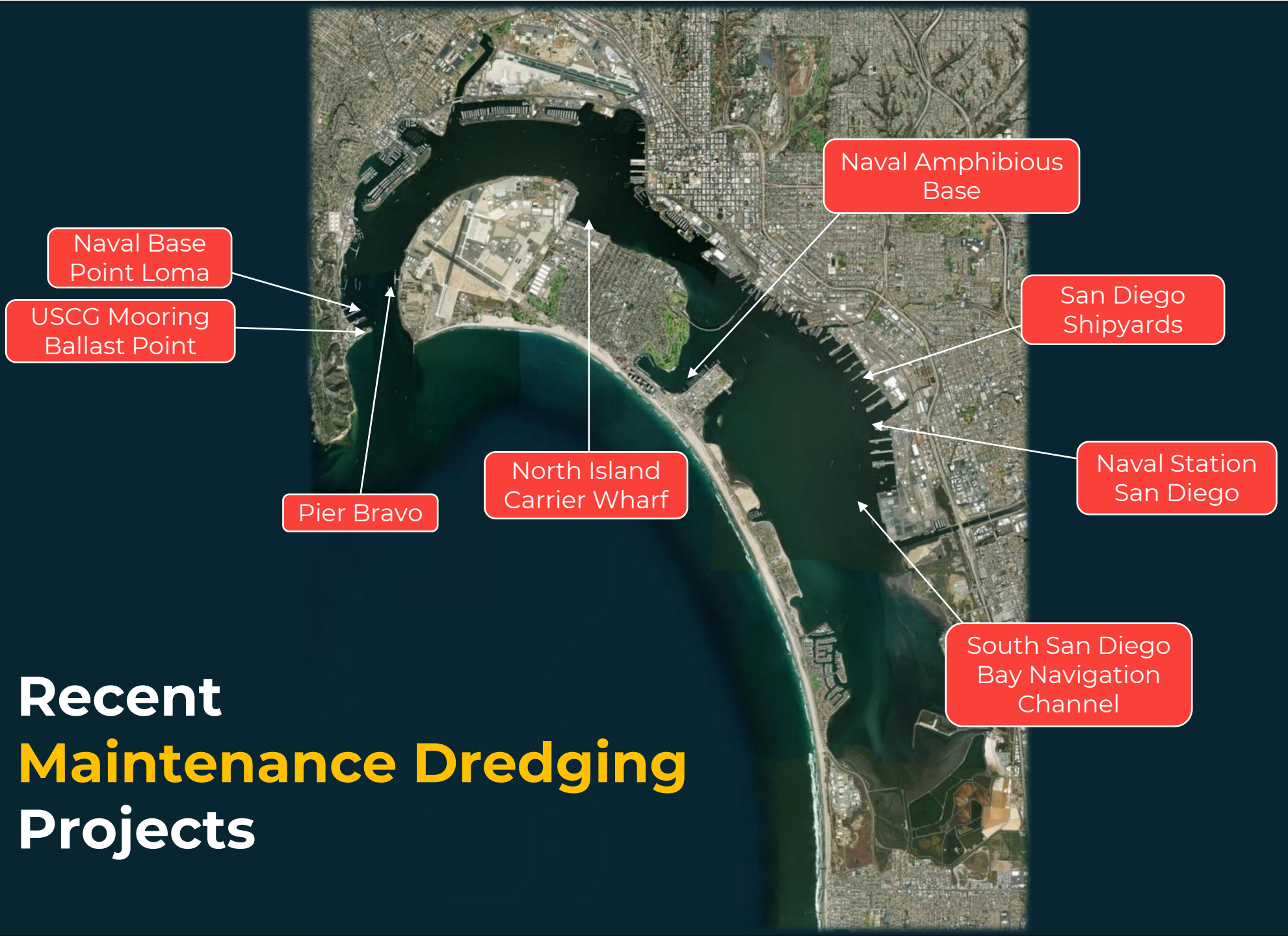


*1946 Dredging San Diego Harbor
around Lindbergh Field Airport*



The Coronado bridge under construction in 1968





Recent Maintenance Dredging Projects



Navy Fuel
Pier 180

North Island
Carrier Wharf

Central San
Diego Bay
Navigation
Channel

BAE Systems "Pride of
California" Dry Dock"

Naval Station
San Diego

Pier 32
Marina

Recent Capital Improvement Projects



Recent **Sediment Cleanup** Projects



La Playa
de Perdue

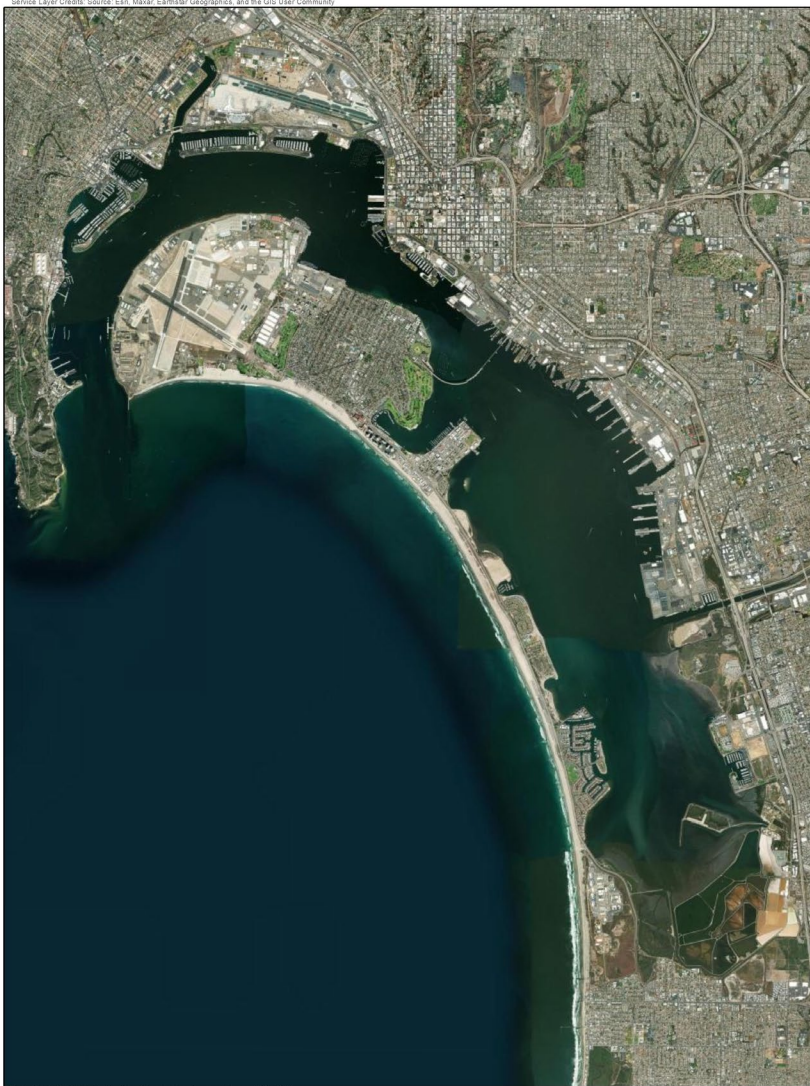
Silver Strand
Boat Lanes

Ponds 10 & 11
Restoration

Eelgrass
Mitigation Site

Chula Vista
Wildlife
Reserve

Recent Beneficial Reuse Projects



In Summary

- ❑ San Diego Bay is a natural embayment that has undergone extensive dredge and fill activities that has created the Bay's shoreline that we know today
- ❑ The Bay is a strategic military port, an engine for international commerce and commercial and recreational fishing, and is home to an abundance of natural habitats and aquatic-dependent species
- ❑ Military and commercial use of the Bay is dependent upon carefully planned dredging activities to maintain deep channels and berthing areas for safe navigation
- ❑ Sediments found in certain industrial areas of the Bay are impacted by legacy contaminants and will require future remediation through strategies such as dredging and capping
- ❑ Beneficial reuse of dredged materials is vital to support habitat creation and enhancement projects



San Diego Bay in 1857

Thank you