CULTURAL RESOURCE RESEARCH AND RECORDS CHECK

19006 HOLLY LANE, MAIN & GARFIELD, HUNTINGTON BEACH, CA

FOR:
CITY OF HUNTINGTON BEACH
2000 MAIN STREET
HUNTINGTON BEACH CA 92648

REQUESTED BY:
BONANNI DEVELOPMENT
3500 BOLSA AVE. SUITE 120
HUNTINGTON BEACH CA. 92649

PREPARED BY:
SRSINC
35109 HIGHWAY 79 #22
WARNER SPRINGS, CA 92086

AUTHORS:
Nancy Anastasia Wiley, Ph.D. Archaeology
Sue Hall , Ph.D. History
Joe Stewart, Ph.D. Paleontology

SRS Job# 1816
February 2022

***Key Words**: Huntington Beach Mesa,19006 Holly Lane, Main & Garfield, USGS Seal Beach Quadrangle, prehistory: Settlement Pattern, Occupational Sequence, Site Characteristics; history: Huntington Beach Holly Sugar Factory 1911-22, Sanborn Fire Insurance Map- 1922, Pacific Electric Railroad Holly Sugar spur, Holly Oil Company, 1910 era Bungalow, 1922 10-room Boarding House and Garage,1922 Grocery, Oil Wells; paleontology: San Pedro Sand, Quaternary marine terrace units, late to middle Pleistocene, old paralic deposits*

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CULTURAL RESOURCE RECORDS CHECKS DURING COVID-19

All California Historic Resources Information System (CHRIS) centers have been closed since early 2020 due to the spread of Covid 19. The requests for cultural resource records checks are being handled remotely in most cases with reduced staff. The South Central Coastal Information Center (SCCIC) located a Cal. State Fullerton handles requests for Orange County. A January request for a cultural resources records check for the Garfield and Main property resulted in this response: "*There are at least 275 jobs ahead of you and we are not providing rush services ....We have two people down with illness right now and we are currently processing jobs that were submitted in October."* Instead, SRSINC was retained to conduct research and records checks within the company archives and library due to the substantial amount of archaeological and paleontological work that the firm previously accomplished on Western Huntington Beach Mesa.

Updated Archaeological Information A thorough investigation of all archaeological sites around Bolsa Bay was conducted by SRSINC from the 1990s through the 2000s. A total of 23 sites encompass Bolsa Bay with 11 sites on Bolsa Chica Mesa and 12 sites on Western Huntington Mesa. The sites all hug the mesa edges emphasizing a concentration on coastal resources. No sites have ever been recorded inland from the embayment. None are known in the project area. All are about a mile west of the Project Site.

Updated Historic Information SRS historian examined on-line resources and other research materials to provide information on historic resources within the Holly-Seacliff study area. Most significant was the Holly Sugar Factory at the northeast corner of Garfield and Main opposite the Project Site which is discussed here. A 1924 aerial photograph and 1922 Sanborn Fire Insurance Map also show a 10-room boarding house and garage, grocery, and oil well on the project site.

Updated Paleontological Information and Records Check. Extensive studies have been completed by the SRS paleontologist as part of several development projects during the 1990s and 2000s on Huntington Mesa who has summarized this information here. Geologic mapping shows that the Project Site lies in "old paralic deposits undivided (late to middle Pleistocene" (Qop). This means that late to middle Pleistocene deposits laid down on the landward side of a coast, in shallow fresh water subject to marine invasions, underlie the shallow disturbed layer at the surface. Both freshwater and marine fossils can be preserved in such deposits.

PROJECT SITE

The project sites is situated within the City of Huntington Beach and can be found on the USGS Seal Beach Quadrangle, 7.5 minute series, 2015 (Figure 1). The proposed project is located at 19002 and 19006 Holly Lane (APNs 159-281-01, 02,03,04,05). The property is a flat, triangular shaped site bounded by Garfield Avenue, Main Street, and Holly Lane (Figure 2). The site area is 2.11 acres gross (1.80 acres net) and is currently unimproved aside from an existing one-story building at the northwest corner occupied by De Guelle Glass. There are four abandon oil wells on the property. In addition to the glass shop, the site is currently used by a local car dealership as a storage lot for cars. The project proposes to demolish the building, cap the wells, and provide 35 three-story townhomes, along with parking, landscape, and common use amenities.

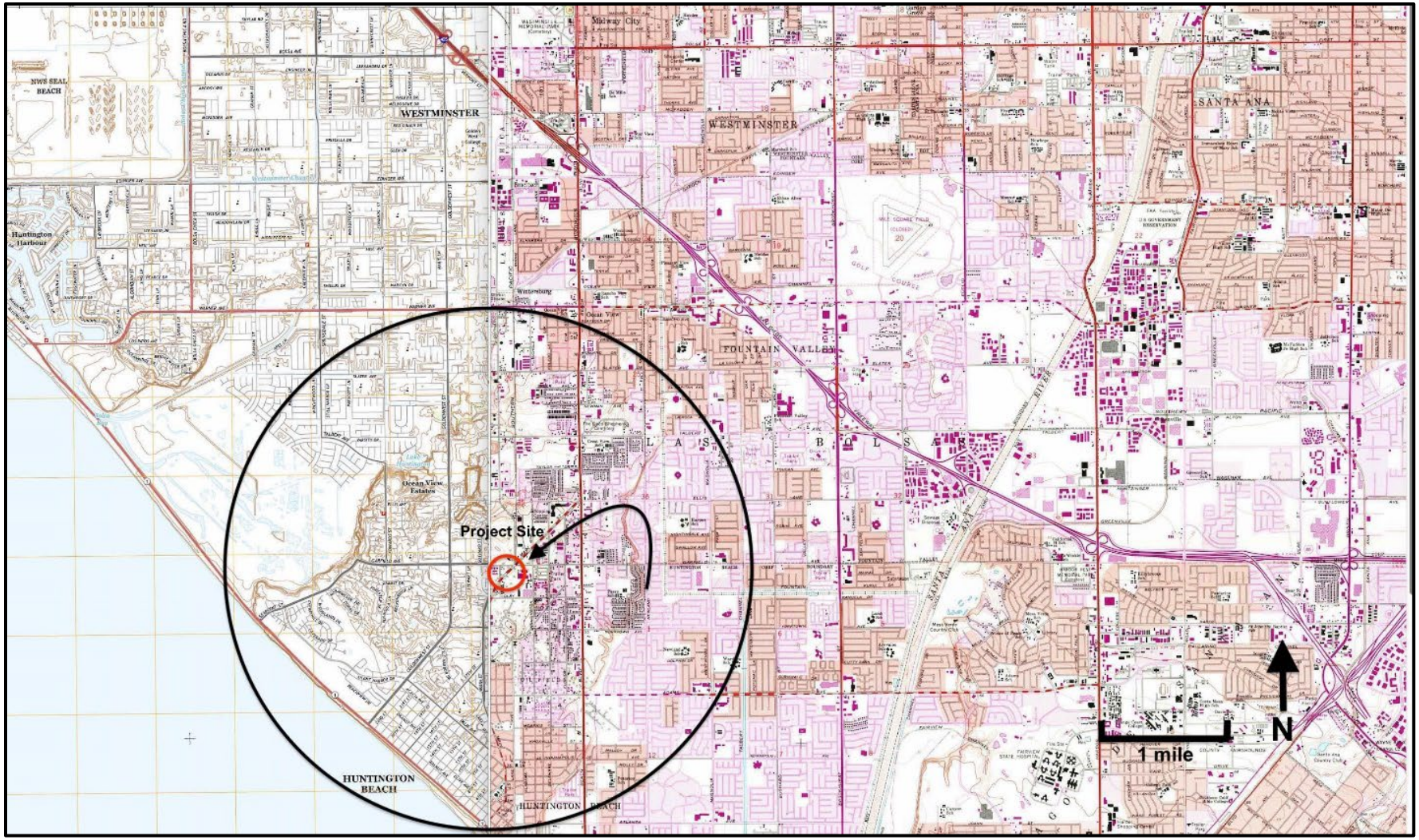


Figure 1. Project Site, Located on Composite USGS Map.

Figure 2. Project Site, Local Vicinity Map.

[Project Site is bounded by Main Street, Garfield Avenue, and Holly Lane]

UPDATED ARCHAEOLOGICAL INFORMATION

This report presents an overview of archaeological work accomplished on 23 sites situated on Bolsa Chica Mesa and Huntington Mesa surrounding Bolsa Bay. Technical data has been previously summarized by SRS INC in eight consecutive digital and replicative poster sessions at the *Society of California Archaeology* annual meetings (2007-2016), in a seven-part lecture series at the *Pacific Coast Archaeological Society* monthly meetings (2010-2012), and in 11 articles published in *Pacific Coast Archaeological Society Quarterly* and *California and Great Basin Anthropology* with co-author Hank Koerper. Archival and other materials from the *"Bolsa Chica Archaeological Project"* gathered over the years during the Bolsa Bay studies have been donated to the John D. Cooper Center and California State University, Fullerton Anthropology Department. An 11-volume series was prepared by SRS INC called the *"Bolsa Chica Technical Series"* and published from 2012 to 2017

Bolsa Bay

Settlement Pattern

Bolsa Chica Mesa and Huntington Mesa collectively encircle an embayment called "Bolsa Bay". As part of 23 recoded archaeological sites, fourteen major cultural sites are situated on these mesas, five on Bolsa Chica Mesa and nine on Huntington Mesa (Figure 3). These sites literally face each other so inhabitants from one mesa could easily see fires and structures of their opposing neighbors, a factor which surely affected regional occupation. Since 1970, when Signal Landmark purchased land on the mesa edges fronting Bolsa Bay, archaeological studies were conducted simultaneously in both areas. Roger Desautels (ARI, SRS) blazed the way for these site investigations even prior to the 1973 requirements brought by the California Environmental Quality Act (CEQA). Surveys and test excavation methods began to be standardized by SRS in the mid-80s anticipating the eventual ability to compare data from six bi-mesa major sites: CA-ORA-83, CA-ORA-85 and CA-ORA-86 (hereafter ORA-83, ORA-85 and ORA-86) on Bolsa Chica Mesa and CA-ORA-365, CA-ORA-82, and CA-ORA-88 (hereafter ORA-365, ORA-82, and ORA-88) on Huntington Mesa (see SRS 1987). The *Bolsa Bay Technical Report Series* brings this 40-year old idea to fruition and this report presents summary data on the five major sites.

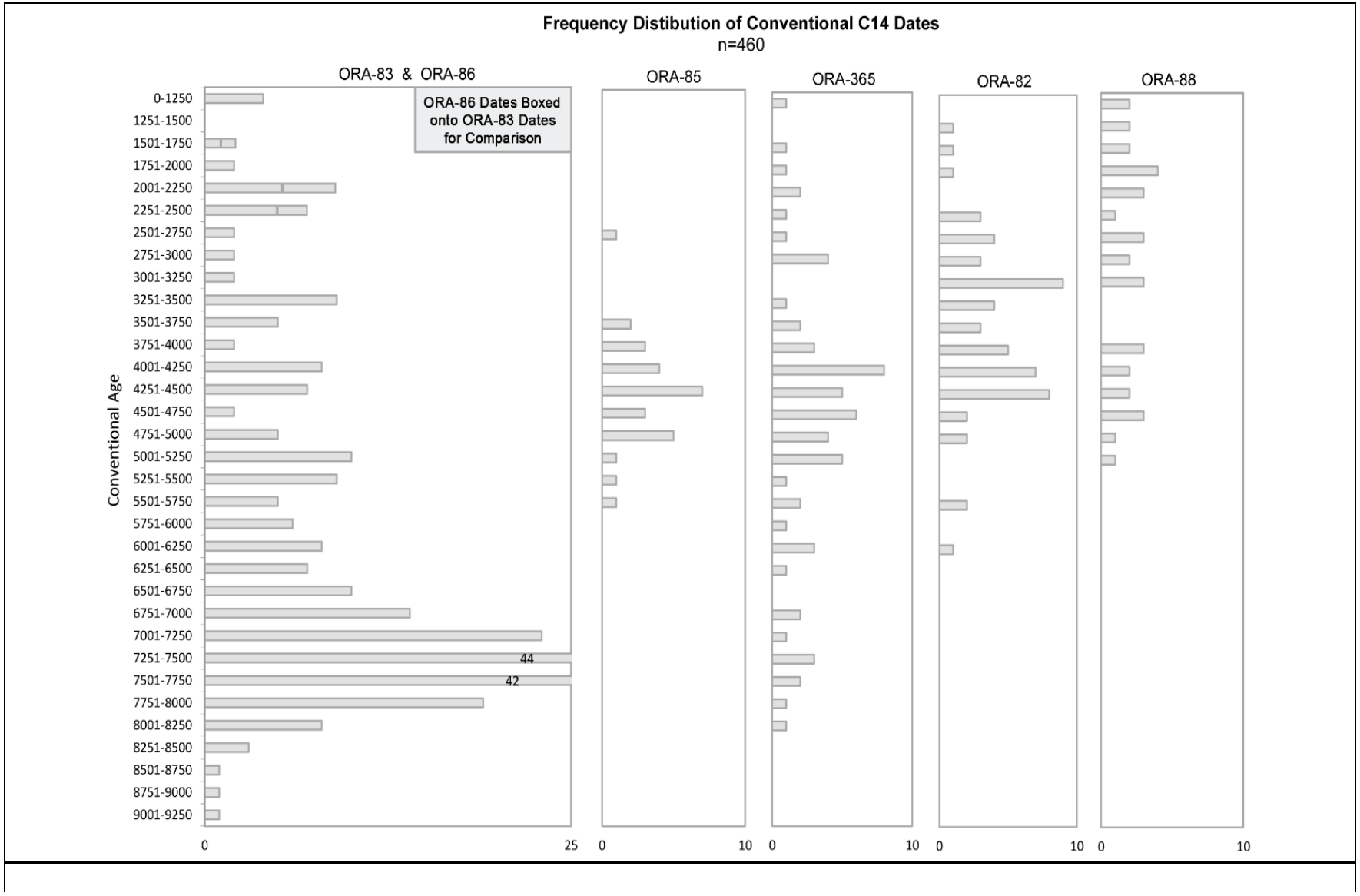
Occupational Sequence

A frequency distribution of conventional radiocarbon dates from the six major sites surrounding Bolsa Bay is provided on Figure 4. A total of 460 dates were processed; 60% of these were on samples from ORA-83, another 7% from ORA-85 and ORA-86, and the remaining 33% from the three major sites on Huntington Mesa. The oldest occupations in the area were on ORA-83 at over 9,000 years ago. This site dominated Bolsa Chica Mesa until about 5,000 years ago when use of ORA-85 was initiated. For about 1,500 years the two sites were occupied simultaneously; ORA-85 was essentially abandoned at around 3,500 YBP. While use of ORA-83 continued for another 2,000 years, a third Bolsa Chica site, ORA-86 was also occupied at the end of this sequence dominated by a single semi-subterranean structure. On Huntington Mesa, early site use was experienced on a minor level at ORA-365 until around 5,000 years ago when similar to sites on Bolsa Chica Mesa all three major sites, ORA-365, ORA-82, and ORA-88, began to experience constant use. Also, like ORA-83, all three Huntington sites were occupied until around 1500-1200 YBP. The frequency of dates within the range for each site further shows that a

CONFIDENTIAL FIGURE

On file with the City of Huntington Beach Community Development – Planning Dept.

2000 Main Street, Huntington Beach, CA 92648


Frequency Distibution of Conventional C14 Dates
n=460
ORA-83 & ORA-86
ORA-86 Dates Boxed onto ORA-83 Dates for Comparison
ORA-85
ORA-365
ORA-82
ORA-88
Conventional Age
0-1250
1251-1500
1501-1750
1751-2000
2001-2250
2251-2500
2501-2750
2751-3000
3001-3250
3251-3500
3501-3750
3751-4000
4001-4250
4251-4500
4501-4750
4751-5000
5001-5250
5251-5500
5501-5750
5751-6000
6001-6250
6251-6500
6501-6750
6751-7000
7001-7250
7251-7500
7501-7750
7751-8000
8001-8250
8251-8500
8501-8750
8751-9000
9001-9250
44
42
0
25
0
10
0
10
0
10
0
10

Bolsa Chica Locality

Settlement Pattern

Eleven prehistoric sites have been recorded on Bolsa Chica Mesa (Figure 3). All but two were situated along the eastern perimeter of the landform, best delineated at the 25' contour, suggesting that environmental and/or social concerns favored facing Bolsa Bay. On the western perimeter facing Anaheim Bay ORA-85, the Eberhart Site, was the only site remaining that was recorded during early mesa surveys; others may have existed in the past but were destroyed by construction early in the historic period. CA-ORA-288, the Knoll Site, a site on a knoll in the lower third of the mesa, was the only site not located overlooking an embayment and the only site that did not have a shell midden deposit.

Occupational Sequence

The radiocarbon dates discussed above (Figure 4) indicate that the ORA-83 dominated the first 4,000 years of land use on the mesa (9000-5000 years ago). Once occupation began on the Eberhart Site (5000 years ago) and on the Huntington Mesa sites, use of the Cogged Stone Site drastically diminished. Why a habitation shift occurred at this time is a critical question in establishing the history of Bolsa Chica Mesa, which in turn assuredly influenced the path that the other sites' inhabitants would take on both mesas.

Site Characteristics

The Bolsa Chica Mesa sites present a full range of activity sites including short and long-term residential bases and limited use areas from the Millingstone through the very early Late Prehistoric Horizons (Wallace 1955) as seen below (Table 1):

Table 1. Activity Sites through Time on Bolsa Chica Mesa.

Site	Time Period	Site Type
ORA-144	---	unknown
ORA-86	Early Late Prehistoric	Limited use area: 1 structure, shell midden
ORA-555	Intermediate/Late	Limited use area: 1 burial; shell midden
ORA-85	Intermediate	Long-term residential base with burials; short duration
ORA-368	Intermediate	Seasonal processing area, shell midden
ORA-83	Early Intermediate	Short-term residential base, structure reuse, shell midden
ORA-84	Late Millingstone	Seasonal processing area, shell midden
ORA-288 only	Millingstone	Seasonal processing area, seed grinding
ORA-289	Millingstone	Seasonal processing area, shell midden
ORA-83	Early-late Millingstone	Long-term ceremonial base, reburials/burials, structures
ORA-83	Post Pleistocene	Special Processing area: Bivalve Bead manufacturing

No residential base is known on Bolsa Chica Mesa during the post-Pleistocene period. This may be attributed to the fact that the shoreline was miles away at 9500 years ago when the first peoples took advantage of the views from the bluff edge for safety and other reasons. The following period, and for several thousand years, ORA-83 was the only substantial site on the mesa

apparently used as a long-term ceremonial area with ceremonial structures, special artifacts such as cogged stones and charmstones, and at least five burial/reburial areas.

By the Intermediate Horizon (5000 years ago), the use of the Cogged Stone Site, ORA-83, changed to a short-term residential base with light structure reuse and shellfish processing. Burying the dead ceased on this site; this activity now became associated with ORA-85 on the other side of the mesa which also had some structural use as shown by the presence of wattle and daub fragments. ORA-85 now becomes the mesa's last residential base. Evidence for the Late Prehistoric is scanty with the best example of mesa activity being expressed in a single structure located at ORA-86 surrounded by a light shell midden. Collectively, these sites provide a picture of environmental, economic, and social change on Bolsa Chica Mesa over at least a 7,700-year period of time.

Western Huntington Mesa Locality

Settlement Pattern

A total of 23 sites and two isolates have been recorded on or near western Huntington Mesa (Figure 3) however, five of the sites have been determined to be dredge deposits. Of the 18 prehistoric sites, nine have received some form of subsurface investigation (ORA-82; ORA-88; ORA-142; ORA-185; ORA-291; ORA-364; ORA-365; ORA-366; and ORA-1214). ORA-364, ORA-366, and ORA-1214 (Mason and Peterson 1991) have received limited testing and have yielded too few artifactual materials to be of comparative value. The remaining six sites form the nucleus of information for interpreting settlement patterns on western Huntington Mesa (Table 2).

Occupational Sequence

Frequency distribution of the numerous radiocarbon dates on Figure B indicate that the majority of the dates for ORA-365 fall within the range of 5,000 to 3,500 years ago, mirroring the intense occupation on Bolsa Chica at ORA-85, and diminished use of ORA-83. Both short-term villages, or residential bases, at ORA-82, 'Edwards Hill Burial Site,' and ORA-88, the 'Bolsa Refinery,' essentially also begin continued habitation at the 5,000-year mark; ORA-365 and ORA-85 help define a new and relatively sudden occupation at Bolsa Bay. The ORA-82 village on Edwards Hill included an extensive cemetery with ceremonial artifacts and other occupation areas. Although its neighbor, ORA-88, contained roughly half the artifacts and radiocarbon dates of the ORA-82 village, the diversity of cultural materials (largely utilitarian items) clearly designated this site as another short-term residential base.

Site Characteristics

The Huntington Mesa sites, like Bolsa Chica sites, include short and long-term residential bases and limited use areas from the Millingstone through the early Late Prehistoric Horizons as defined by William J. Wallace (1955) and as seen below (Table 2):

Table 2. Activity Sites through Time on Huntington Mesa.

Site	Time Period	Site Type
ORA-82	Intermediate/Late Prehistoric	Short-term residential base; burial site
ORA-185	Intermediate	Campsite; shallow but intensively used
ORA-88	Intermediate/Late Prehistoric	Short-term residential base
ORA-291	Intermediate	Short-term residential base; house floor
ORA-142	Millingstone	Limited Campsite
ORA-365	Early-late Millingstone- Late Prehistoric	Long-term residential base; 2 burials

As on Bolsa Chica Mesa, one site, ORA-365, the 'Borchard Site,' appears to have dominated the early periods of occupation and continued to be used throughout the entire span from the early Millingstone Horizon to the early Late Prehistoric, or from approximately 8000 to 1250 years ago. Burials, features, and an immense variety of artifacts indicate that this site was a village site and used long-term, based on radiocarbon dating. The site covered three terraces overlooking Bolsa Bay.

Huntington Mesa also had at least two Limited Campsites for the Millingstone and Intermediate time periods. ORA-142, the 'Goldenwest Site,' is limited in quantity of materials although they extended to one meter in depth; conversely ORA-185, the 'Gothard Site,' is limited in depth to near surface deposits but included a large variety of materials including a phallic fetish and steatite effigy.

These six sites provide a picture of prehistoric life on Huntington Mesa. The recovered materials emphasized use of this locality during the Millingstone Horizon and Intermediate time periods. Although some Late Prehistoric period materials are found, their appearance is rare. Based on the diversity of activities suggested by the artifactual remains, the sites appear to include four villages and two campsites. At least three of these sites are multi-component sites, suggesting a high degree of sedentism or reuse of previous site areas throughout at least the Intermediate and Late Prehistoric time periods, for nearly 4,000 years of intense occupation, after sporadic use during the earliest time period.

Note: *These are the same six sites discussed as the only actual site deposits in the 1989 Holly-Seacliff GPA for this region (RMW Paleo Associates 1989). Other small shell deposits in the area have been determined to be redeposited materials and do not represent primary deposits. All known archaeological sites are about one-mile west of the Project Site, none are known within the project area.*

References Cited:

Wallace, William J.
1955 *A Suggested Chronology for Southern California Coastal Archaeology*. **Southwestern Journal of Anthropology** 11(3):214-230.

Mason and Peterson
1991 **Report on Archaeological Data Recovery at Site Ora-1214**, Central Park #8 Project in The City of Huntington Beach, Orange County, California. Revised. On file at South Central Coast Information Center, Anthropology Department, California State University, Fullerton.

RMW Paleo Associates
1989 *4.11 Cultural Resources*. **Holly-Seacliff General Plan Amendment. Draft Environmental Impact Report** No. 89-1, Volume 1, State Clearinghouse No.89010412.

SRS INC
2012-2017 **Bolsa Chica Technical Series**, Volumes 1-11: *Prehistoric Research Design, Ethnographic Overview, Historic Bolsa Chica, The Sites, Food Acquisition & Modified Debris, Shell Beads, Technological Analysis of Stone Tools, Stone Geometrics: Cogged and Uncogged, Extraordinary Items, Features and Functions, and Chronology and Cultural Implications.*

UPDATED HISTORIC INFORMATION

19006 Holly Lane- Historic Location

The Project Area (yellow triangle)—bordered by Main Street, Garfield Avenue, and the appropriately named Holly Lane—sat just south of and across the street from the Holly Sugar Factory. The factory set back from the Northwest corner of the Main Street and Garfield Avenue intersection – approximately where the SeaGate at Huntington Seacliff development and Peter Green Park are located today (2022) (red rectangle).

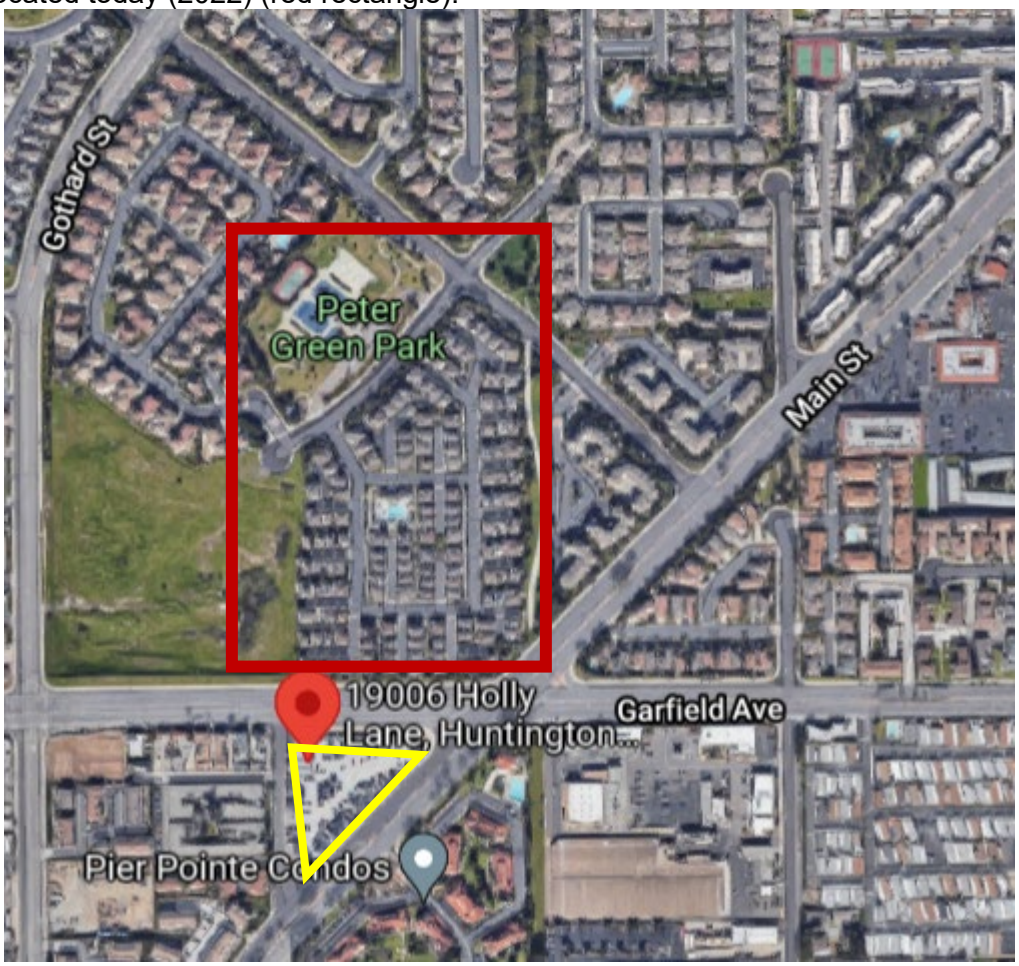


Figure 5. Google Maps. *Accessed 10 February 2022.*

Sources reveal that the number of buildings comprising the Holly Sugar Factory stood on that property from its construction in 1911 to its piecemeal removal and demolition which concluded in 1986. In 1986, the last remaining structure from the factory complex, the 1910 era bungalow that served as the Sugar Factory Office, was torn down.[1] In addition to photographs locating the factory just North of the subject parcel, 1922 Sanborn Maps support this conclusion as well. Both the subject property (see Figure 7) and the adjacent Holly Sugar Company property (see Figure 8) sat outside Huntington Beach's city limits in 1922 (see Figure 11).

[1] Roxana Kopetman, "Huntington Beach Preservation Group is Unable to Save 1910 Building," *Los Angeles Times* (26 January 1986). Available online from https://www.latimes.com/archives/la-xpm-1986-01-26-me-212-story.html. Accessed 10 February 2022.

Note: *While the Holly Sugar Factory did not sit on the subject property, it should be noted that photographic evidence and the 1922 Sanborn Maps do indicate a 10-room boarding house and garage (approximately where DeGuelle Glass Company is located today), a grocery, and an oil well were located on the lot (see Figures 7 and 9).*[2]

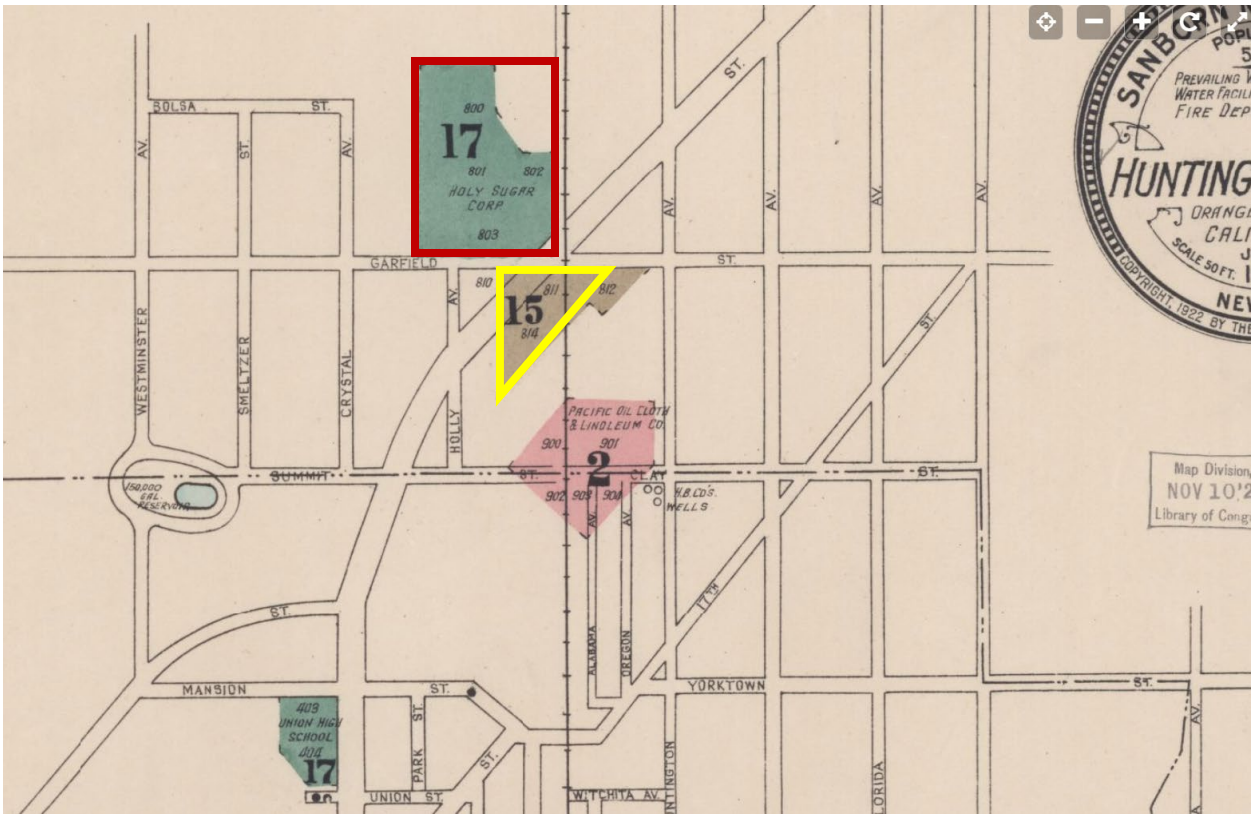


Figure 6. Sanborn Map Company, "Sanborn Fire Insurance Map from Huntington Beach, Orange County, California" (New York, June 1922). *Available from https://www.loc.gov/resource/g4364hm.g4364hm_g005991922/?sp=1. Accessed 11 February 2022.*

Subsection #15 (Figure 7 following) colored brown and outlined in yellow on the Sanborn Map shows the three main structures within the Project Area in 1922, a 10-room boarding house, garage, grocery and oil well (see also Figure 9 aerial photograph, and footnote 2 below)\

Subsection #17 (Figure 8 following) colored green and outlined in red on the Sanborn Map shows the Holly Sugar factory with the main complex and ancillary structures present on the property in 1922.

[2] It is possible that the oil well visible in the 1924 photograph is the "Jackie Coogan No. 4" brought to the general location by the White-Behr Oil Company in 1923. According to the *Los Angeles Times*, the Jackie Coogan No. 4 "lies on the south side of Garfield street near the Holly sugar factory, and across the street from the office of the company." "Metal Mining and Petroleum: Five New Wells at Huntington," *Los Angeles Times* (11 June 1923), pg. I11.

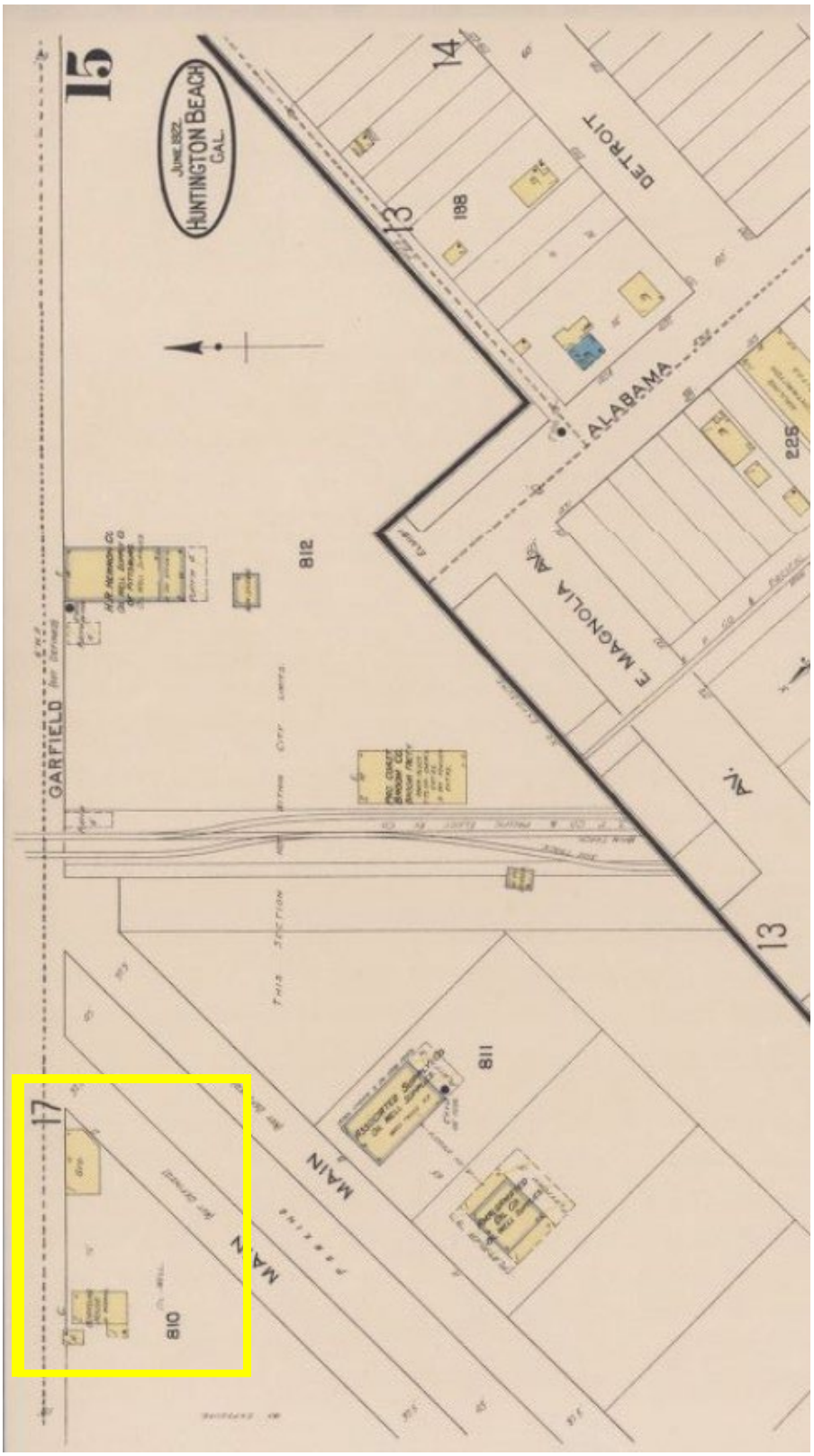


Figure 7. Subsection #15: Sanborn Map Company, "Sanborn Fire Insurance Map from Huntington Beach, Orange County, California" (New York, June 1922). *Available from https://www.loc.gov/resource/g4364hm.g4364hm_g005991922/?st=gallery. Accessed 10 February 2022*

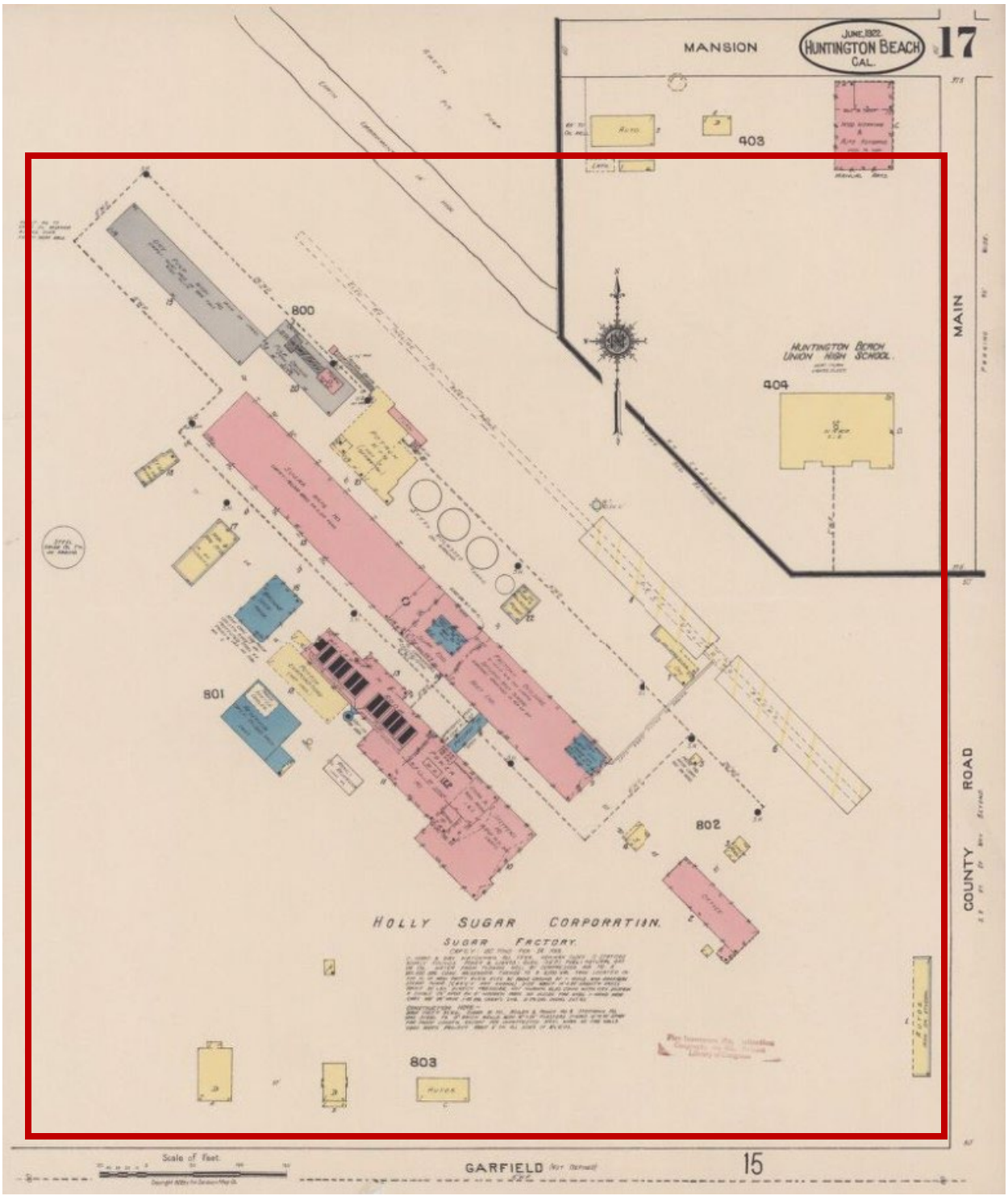


Figure 8. Subsection #17: Sanborn Map Company, "Sanborn Fire Insurance Map from Huntington Beach, Orange County, California" (New York, June 1922). *Available from https://www.loc.gov/resource/g4364hm.g4364hm_g005991922/?sp=17. Accessed 10 February 2022.*

Figure 9. Aerial Photograph: Security Pacific National Bank Photo Collection, "Holly Sugar Plant, Huntington Beach (1924)," Web. *Available online at https://calisphere.org/item/09340d3c8b0204de9a87da7804f55b0b/. Accessed 10 February 2022.*

Note: *Many resources provide detailed information on the Holly Sugar Company, its presence in Orange County, and its Huntington Beach factory. It should be noted, however, that some archival photographs mislabel their Holly Sugar factory as the one that was located in Huntington Beach. The structures in these photographs, however, do not align or showcase the same factory, warehouse, or adjacent property buildings—as seen in Figure 9, above and corroborated in the detailed Sanborn Map on Figure 8—which are clearly identified as the Huntington Beach Holly Sugar Factory.*

History of the Holly Sugar Factory in Huntington Beach

In the first decade of the 20th century, Huntington Beach saw agricultural growth in the harvesting of sugar beets. By 1906, farmers in Huntington Beach and its surrounding neighbors "were shipping 400 to 500 tons [of sugar beets] per day at an average $5.50 per ton or over $200,000.00

per crop."[3] In other words, sugar beets (and the accompanying industrial process of refining the beets to sugar) was a highly lucrative business in the area.

As a result, the Holly Sugar Company, located out of Colorado, considered purchasing property and opening a refinery beginning in 1909.[4] The Sugar Company "entered into negotiation with the Huntington Beach Company, subdividers of the Garfield Annex industrial subdivision" and purchased approximately 60 acres at the intersection of Garfield Avenue and Main Street.[5] By the end of 1910, the Holly Sugar Company was "incorporated under the laws of California" and begun construction early in 1911.[6] The *Los Angeles Herald* indicated that the "new factory will be owned entirely by the Colorado company, no stock being for sale and no bonus being asked from the community."[7] S.W. Sinsheimer was listed as Construction Engineer for the "main factory building 450x65 feet, and the sugar warehouse 300x50 feet" at the time of incorporation.[8]

However, the sugar plant began construction in 1911 under Engineer Anthony Tovatt and contractor supervisor Carl Leonhardt.[9] In 1914, *The Los Angeles Times* noted that the construction of the Holly sugar factory cost $1,250,000.[10] C.A. Johnson served as General Manager of the factory even prior to its construction. He took over all company affairs in Huntington Beach beginning in 1910 and oversaw the large sugar refining operation.[11] A 1917 report of California Beet Sugar Factories indicated that the factory had been built with a slicing capacity of 1,200 tons per 24 hours.[12] In addition to the main factory and sugar warehouse, the complex also consisted of "a fine brick office building…and a beautiful two story home for the manager." Photographs indicate that the area was well landscaped at the intersection as well.[13]

---

[3] Delbert G. Higgins, "Holly Sugar Company" (Huntington Beach Historical Society), 17 June 1975.
[4] Ibid.
[5] A 1978 anniversary edition of the *SeaCliff Breeze* notes the sale of 60 acres to the Holly Sugar Company. Huntington Beach Company, "The SeaCliff Breeze" (Huntington Beach, California: May 1978), pg. 5. Available from https://www.huntingtonbeachca.gov/files/users/library/complete/090501-2.pdf. Accessed 10 February 2022.
[6] "Sugar Acreage Signed: Long Season Assured for Next Year at the New Factory to be Built at Huntington Beach," *Los Angeles Times* (Los Angeles, California: 4 December 1910), pg. I23.
[7] "Colorado Company Signs for Acreage at Santa Ana. No Stock for Sale," *Los Angeles Herald* (Los Angeles, California: 13 October 1910) (Vol. 33, No. 12).
[8] "Sugar Acreage Signed."
[9] Higgins. According to the Los Angeles City Planning Department, Carl Leonhardt was a "well-known contractor" in Los Angeles as early as the 1900s. City of Los Angeles, Office of Historic Resources/Cultural Heritage Commission, "Historic-Cultural Monument Nomination Form: King Edward Hotel" (Los Angeles, 2019). Available online from https://planning.lacity.org/odocument/81104779-006d-4d2e-bedc-0aa33aa7ba9f/CHC-2020-288.pdf. Accessed 20 February 2022.
[10] "Industry Back of Beach Town: Huntington Beach Forging Ahead Rapidly," *Los Angeles Times* (Los Angeles, California: 3 May 1914), pg. VI1.
[11] "Go Ahead with Factory: Contract for Foundation of Beet Sugar Company's Building at Huntington Beach is Let," *Los Angeles Times* (Los Angeles, California: 29 October 1910), pg. II2. It should be noted that this resource listed the general manager as SW Johnson. However, two other resources from 1914 and 1918 noted a Mr. "Carl A." Johnson and "C.A." Johnson served as the general manager of the Holly Sugar Corporations western factories. "Orange County is the Sugar Bowl of U.S.," *Huntington Beach News* (Huntington Beach, California: 27 November 1914) (Vol. 11, No. n/a), pg. 1; No title, Hun*tington Beach News* (Huntington Beach, Ca: 5 April 1918) (Vol. 14, no. 30).
[12] Torsten A. Magnuson, "History of the Beet Sugar Industry in California," in *The Historical Society of Southern California* (1918) (Vo. 11, No. 1), pg. 78.
[13] Higgins.

Additional buildings (with noteworthy evidence) associated with the factory included:

- An addition to the plant was constructed by Carl Leonhardt in 1912. According to *Engineering News*, "the building will be of brick and steel on a concrete foundation and will cost $30,000."[14]

- a garage (18 x 126 feet), whose construction was awarded to Warner & Catching in March of 1918.[15]
- 1922 Sanborn Maps of the facility indicate the property also included a free-standing lunchroom east of the office, a Hose House, office next to the "beet unloading racks," a molasses pump, steel molasses tanks, pulp drying building, dry pulp warehouse, Potash MFG, stage, iron and pipe stage, machine shop, a water reservoir (with a capacity of 250,000 gallons), an additional garage, and two dwellings.[16]

City Historian Delbert G. Higgins wrote of the warehouse:

The large warehouse which was of heavy steel construction with large brick walls and reinforced concrete roof was constantly used as a sugar warehouse by Holly Sugar Company, first for locally refined sugar, and during later years for sugar refined in their Santa Ana Plant. The concrete used in building the roof and floor of the building came from sand and gravel scooped out of the ocean at low tide about ½ mile east of the pier. It was piled on the beach and left all winter for the winter rains to wash out the salt then sold the following year.[17]

In 1912, the factory increased the number of those employed from 200 to 250. The rise in employees was necessary because of expanding on-site production. New machines added to the complex included a "complete crushing and milling apparatus…for crushing lime used in sugar-making."[18] The machine was powered by a 1000-horse-power turbine. As a result, the power-house increased its total output exceeding 2500. Additionally, "a new concrete water reservoir with a capacity of 250,000 gallons [was] built and the size of the silo for beet pulp [was] increased to twice its former capacity."[19] In 1914, the *Los Angeles Times* argued the factory was "the second largest in the United States. It employs 250 to 450 men."[20]

The Holly Sugar Factory was recognized as helping the agricultural businesses adjacent to Huntington Beach between 1911 and 1922. Once the summer tourist season wound down, harvesting was the primary source of employment.[21] In other words, the factory complex added stability to the already burgeoning economy and accomplishments of the developing beach city.

---

[14] "Construction News: Industrial Works," *Engineering News* (29 February 1912), pg. 121.
[15] James J. Conrad, "Building Garage at the Holly Sugar Factory," *Huntington Beach News* (Huntington Beach, Ca: 8 March 1918) (Vol. 14, No. 26).
[16] Sanborn Map Company, "Sanborn Fire Insurance Map from Huntington Beach, Orange County, California" (New York, June 1922). Available from https://www.loc.gov/resource/g4364hm.g4364hm_g005991922/?sp=17. Accessed 10 February 2022.
[17] Higgins.
[18] "Enlarge Working Force: Holly Sugar Factory at Huntington Beach Increases its List of Employees and Buys Machinery," *Los Angeles Times* (Los Angeles, Ca: 21 June 1912), ph. II9.
[19] Ibid.
[20] "Industry Back of Beach Town: Huntington Beach Forging Ahead Rapidly," *Los Angeles Times* (Los Angeles, Ca: 3 May 2014), pg. VI1.
[21] Higgins.

In 1914 the Holly Sugar Company paid local farmers $850,000 for their beets.[22] During the years 1917-1918, in the midst of World War I, the sugar refinery was "vital due to the need for sugar during the war years and the shortage."[23]

In 1913, the factory was listed as part of an automobile tour during Huntington Beach's "Open House." The open house and tour highlighted the many improvements—civic and industrial—to the growing city and its surrounding agricultural fields.[24] The factory's presence at Main and Garfield contributed to the growing city and its civic improvements. Civic improvements also benefited the Sugar factory—most notably the new municipal sewer route. Although built by the city, the cost of the sewer's construction was shared by the Holly Sugar Company. The new sewer route began "at the factory site a quarter of a mile north of the city and extend[ed] due south through the ranch house property of the Huntington Beach Company to Railroad avenue and down that avenue to its intersection with Olive avenue, thence southeast to the proposed location of the septic tanks near Ocean avenue…"[25]

In addition to the civic improvements that benefited the Holly Sugar Company and the industrial development of the sugar factory itself, other elements of industrialization surrounded the factory and helped its stability and growth. A line (noted as the Huntington Beach-La Bolsa Line) of the Southern Pacific Railway adjoined The Pacific Electric Railway Santa Ana – Huntington Beach Line in Huntington Beach and ran almost 3 miles inland, semi-parallel to Main Street, along the Southeast side of the factory property. It began operation in 1911—the same year Southern Pacific merged with Pacific Electric—to transport workers between Huntington Beach and the sugar refinery, as well as freight.[26] The line extended off of the railway line running from Santa Ana through Talbert (Fountain Valley) and into Huntington Beach which was constructed in 1907.[27] In 1914, the Pacific Electric Railway "informed the Huntington Beach Company and the City of Huntington Beach that it will at once provide for local service on the line that runs from the station at the water front to the Holly sugar factory, five cars a day to be operated in each direction."[28] Passenger service along the La Bolsa Line ended in 1928.

In order to support the sugar beet transport and sugar production, the Pacific Electric Railroad also built two spurs—one of them being the Holly Sugar spur. The location of the Holly Sugar Spur is not entirely clear. Most railroad maps do not note the spur at all. A 1981 inventory map of Pacific Electric Routes in Caltrans' holdings does show the spur extending northwest from the

[22] "Industry Back of Beach Town."
[23] Higgins.
[24] "Special Programme: Huntington Beach Will Devote Today to Entertaining Visitors and Showing Town's Varied Assets," *Los Angeles Times* (Los Angeles, Ca: 18 February 2013), pg. II11.
[25] "Go Ahead with Factory: Contract for Foundation of Beet Sugar Company's Building at Huntington Beach is Let," *Los Angeles Times* (Los Angeles, Ca: 20 October 1910), pg. II2.
[26] "Farming Sugar Beets," Historic Southern Santa Ana. Website. Available from https://historicsouthernsantaana.wordpress.com/businesses/farming-sugar-beets/. Accessed 10 February 2022. Electric Railway Historical Association of Southern California, "La Bolsa Line," Pacific Electric. Web. Available via http://www.erha.org/peslab.htm. Accessed 11 February 2022.
[27] Electric Railway Historical Association of Southern California, "Santa Ana-Huntington Beach Line," Pacific Electric. Web. Available via http://www.erha.org/pessahb.htm. Accessed 11 February 2022.
[28] "To Open Bids This Month: Huntington Beach Ready to Start Projected Sewer Improvements," *Los Angeles Times* (Los Angeles, Ca: 20 September 1914), pg. VI1.

main line above La Bolsa (see Figure 10).[29] However, a 1912 map suggests the spur branched off from the downtown Huntington Beach locale rather than up at La Bolsa (see Figure 11).[30]

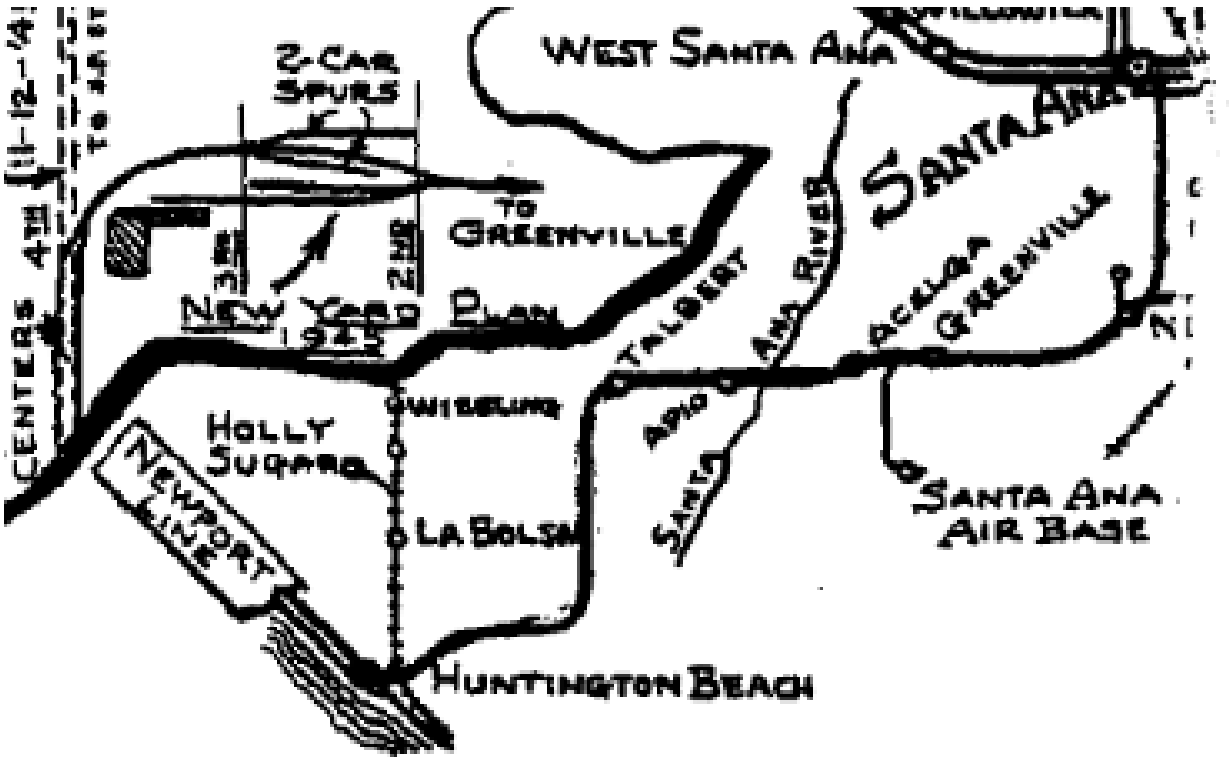


Figure 10. California Department of Transportation (Caltrans), "Santa Ana-Huntington Beach Line," 1981 Inventory of Pacific Electric Routes (February 1982), pg. 142. *Available online from http://libraryarchives.metro.net/DPGTL/pacificelectric/1981-caltrans-inventory-of-routes.pdf. Accessed 11 February 2022.*

[29] California Department of Transportation (Caltrans), "Santa Ana-Huntington Beach Line," 1981 Inventory of Pacific Electric Routes (February 1982), pg. 142. Available online from http://libraryarchives.metro.net/DPGTL/pacificelectric/1981-caltrans-inventory-of-routes.pdf. Accessed 11 February 2022.

[30] T. Newman, "Map of Los Angeles County: electric, steam railway lines, and mountain guide and also portion of Orange County," 1912. Available from https://www.loc.gov/resource/g4363l.ct001796/?r=-0.021,0.687,1.002,0.378,0. Accessed 11 February 2022.

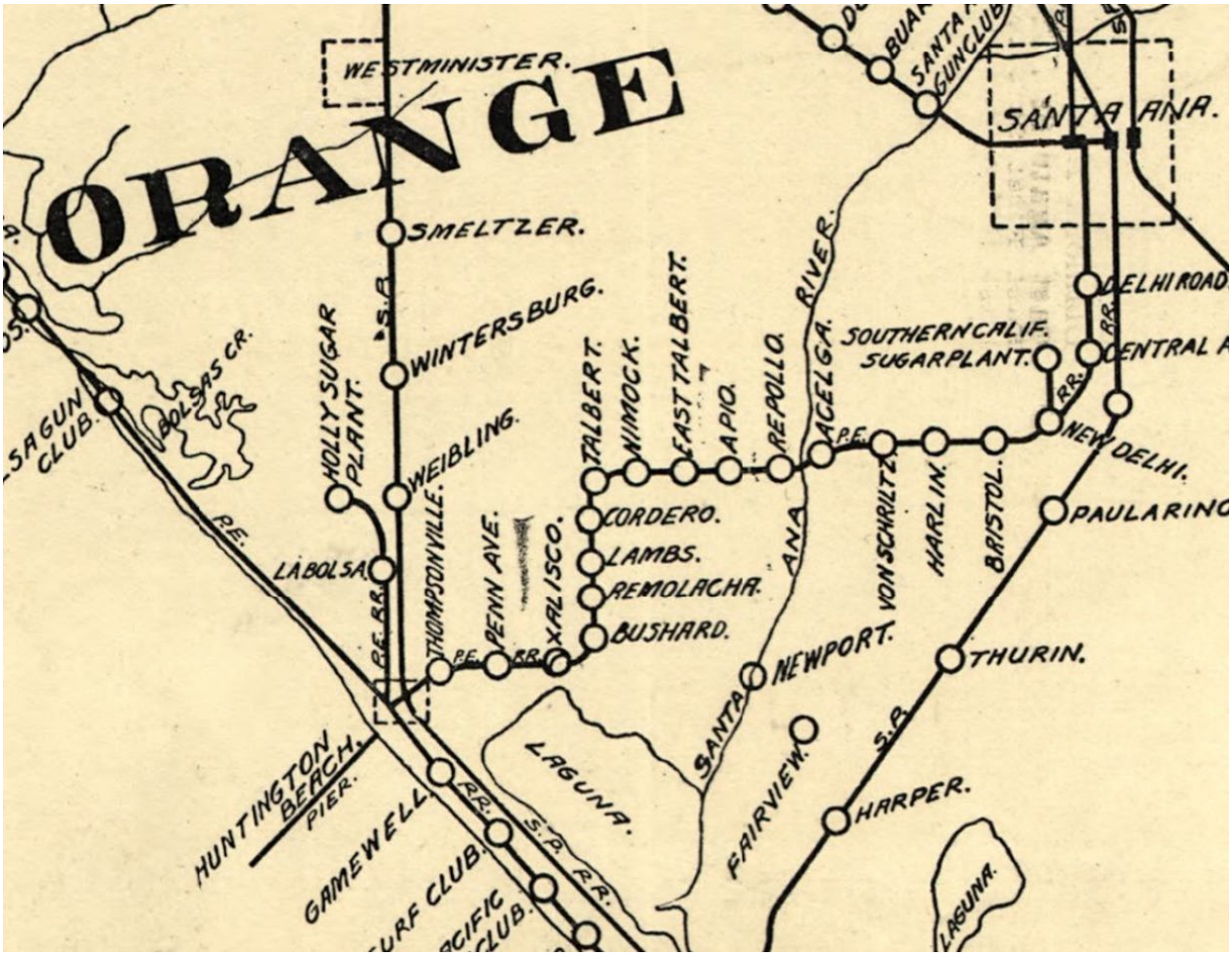


Figure 11. T. Newman, "Map of Los Angeles County: electric, steam railway lines, and mountain guide and also portion of Orange County," 1912. *Available from https://www.loc.gov/resource/g4363l.ct001796/?r=-0.021,0.687,1.002,0.378,0. Accessed 11 February 2022.*

For just under 10 years, the Holly Sugar Factory served as one of three prevalent industrial factories in what is now the general area of Garfield Avenue and Main Street. Together, Holly Sugar Factory, the Huntington Beach Broom Factory, and the La Bolsa Tile Factory encouraged industrial job growth in Huntington Beach. Likewise, the agricultural acreage dedicated to beet growth encouraged farm jobs as well. In 1920, however, when oil was discovered in Huntington Beach, it became the driving force behind jobs and development. In 1921, the Holly Sugar Company organized the Holly Oil Company under law—with the purpose of repurposing its complex property in Huntington Beach to oil extraction and refinement.[31] Stockholders in the Holly

[31] City of Huntington Beach, "Cultural Resources," General Plan Update (March 2017), pg. 4-6. Available from https://www.huntingtonbeachca.gov/files/users/planning/Volume-I-Technical-Background-Report.pdf. Accessed 10 February 2022. See also: Galvin Preservation Associates, "City of Huntington Beach Historic Context & Survey Report," (2014). Available online from https://www.huntingtonbeachca.gov/files/users/planning/Historic_Context_and_Survey_Report_Final_Draft.pdf.

Sugar Company were "given first preference to purchase shares of the new Holly Oil Company stock at $2 a share."[32]

In its transition, the Holly Oil Company dismantled the sugar beet refinery, shipping it to Torrington, Wyoming, where it was rebuilt and operated on site beginning in 1926.[33] Other buildings on the property were repurposed, but the "former sugar beet refinery property soon had 16 producing wells" and further railroad sidings "were constructed to handle the 24-hour-a-day-oil operations."[34] Those railroad sidings are visible in the 1922 Sanborn map and the 1924 aerial photograph of the property (see Figures 4 and 5).

Between 1922 and 1986, the buildings that once comprised the Holly Sugar Company were slowly dismantled. By 1975, City Historian Higgins noted "the fine home is gone, the sugar mill razed and last week workmen with a crane and breaking ball knocked down the warehouse and hurriedly reclaimed the used brick for other uses. The area will be restored to its natural state with only the Office building left to show of a cycle and era in the history of Huntington Beach."[35] In 1986, the last remaining structure from the factory complex, the 1910 era bungalow that served as the Sugar Factory Office, was torn down.[36]

Figure 12. The Holly Sugar Factory in Huntington Beach from the vantage point on or near the subject property. Photo credited to the Huntington Beach Historical Society. *Available online from https://ochistorical.blogspot.com/2007/12/holly-sugar-plant-huntington-beach.html. Accessed 10 February 2022.*

[32] "Holly Oil Company," American Oil & Gas Historical Society. Available from https://aoghs.org/old-oil-stocks/holly-oil-company/. Accessed 11 February 2022.
[33] Ibid.
[34] Ibid.
[35] Higgins.
[36] Kopetman.

UPDATED PALEONTOLOGICAL INFORMATION

The 1989 Holly-Seacliff GPA contained a paleontological summary prepared by RMW Paleo Associates and also a records check by Natural History Museum of Los Angeles (LACMNH) prepared by the assistant curator, Dr. J.D. Stewart. Dr. Stewart now works with SRS on paleontological assessments and has prepared this update.

Geologic Setting

The project site is located in the Peninsular Range Geomorphic Province of California. Physiographically, the northern part of the Peninsular Ranges Province is divided into three major, fault-bounded blocks, the Santa Ana Mountains, Perris, and San Jacinto Mountains. The Santa Ana Mountains block is the westernmost of the three, extending eastward from the coast to the Elsinore fault zone. Tertiary sedimentary rocks ranging in age from Paleocene through Pliocene underlie most of the western part of the Santa Ana block.

The geologic mapping of Morton and Miller (1981) is shown in Figure 13. It shows that the Project lies in “old paralic deposits undivided (late to middle Pleistocene” (Qop). This means that late to middle Pleistocene deposits laid down on the landward side of a coast, in shallow fresh water subject to marine invasions, underlie the shallow disturbed layer at the surface. One would predict that both freshwater and marine fossils would be preserved in such a deposit.

Records Search AND Literature Search

SRSINC requested a paleontological records search from the Natural History Museum of Los Angeles County (LACM). The report (Bell, 2022, Appendix) stated that the museum has several nearby localities. Localities VP 7657-7659 are at Ellis Avenue and Patterson Lane (less than a mile to the northeast) at a depth of 150 to 350 feet. These localities are of Pleistocene age. Those localities produced four types of sharks and seven types of bony fish fossils. Localities VP 7366, 7422-7425, and 7679 are near the Pacific Coast Highway and Huntington Drive and near the original ground surface. They are also of Pleistocene age. Those localities produced a wealth of small animal fossils. These include a shark, a stickleback, three types of salamanders, a tree frog, a toad, five types of lizards, seven kinds of snakes, a turtle, two kinds of birds, a bat, a mole, a shrew, seven types of rodents, a rabbit, and remains of mammoth and horse. With the exception of the mammoth and horse, the fossils from both areas are micro-vertebrate fossils. The only publication dealing with any of the above localities is that of Wake and Roeder (2009). They focused on the amphibians and reptiles from the fauna. They also reported two radiocarbon dates from horizons producing the fauna.

Conclusions

The geologic mapping indicates Pleistocene sediment at or near the surface. Pleistocene sites nearby have produced many vertebrate fossils, as well as invertebrates. It is recommend that a Paleontological Resource Impact Management Plan (PRIMP) be developed once the geotechnical characteristics of the site have been documented. As micro-vertebrate fossils are the primary resource found in nearby sites, the PRIMP should focus on recovering micro-vertebrate fossils. Measures 6 through 10 of the Holly-Seacliff Specific Plan should be incorporated in the PRIMP as described below. Enforcing the PRIMP should reduce the Project impact to paleontological resources to a less than significant level.

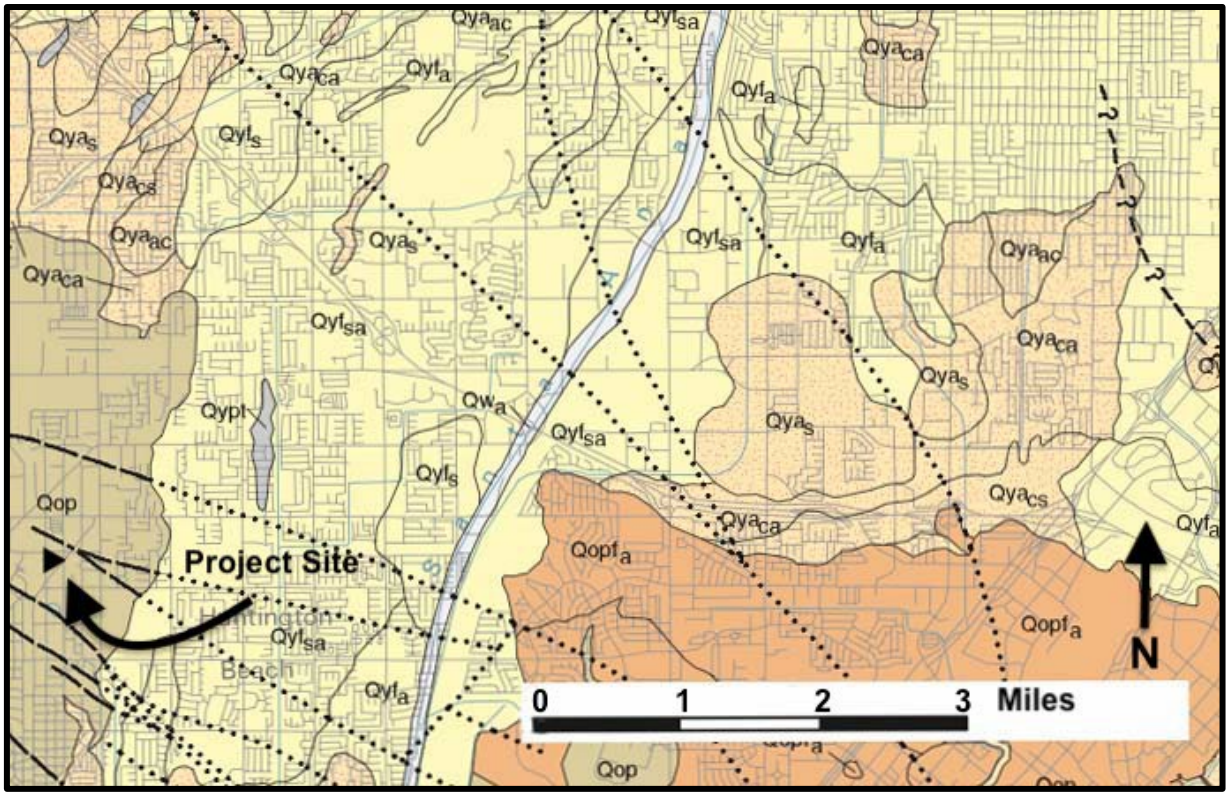


Figure 13. Geologic Map, showing the Project Site.

Legend:

Qop, Old paralic deposits undivided (late to middle Pleistocene) on Project Site

Qopfa, Old paralic deposits (late to middle Pleistocene) overlain by alluvial fan deposits; sand;
Qyaac, Young axial channel deposits (Holocene and late Pleistocene); sand and clay;
Qyaca, Young axial channel deposits (Holocene and late Pleistocene); clay and sand;
Qyas, Young axial channel deposits (Holocene and late Pleistocene); sand and silt;
Qyfa, Young alluvial fan deposits (Holocene and late Pleistocene); sand;
Qyfs, Young axial channel deposits (Holocene and late Pleistocene); silt;
Qyfsa, Young axial channel deposits (Holocene and late Pleistocene); silt and sand;
Qypt, Young peat deposits (Holocene and late Pleistocene).

References Cited:

Bell, A.
2022 Paleontological records search report, **Natural History Museum of Los Angeles County**.

Morton, P. K., and R. V. Miller.
1981 Geologic Map of Orange County California, Showing Mines and Mineral Deposits. **California Division of Mines and Geology, Bulletin** 204. Scale 1:48,000.

Wake, T. A., and M. A. Roeder.
2009. A Diverse Rancholabrean Vertebrate Microfauna from Southern California Includes the First Fossil Record of Ensatina (*Ensatina eschshholtzii*: Plethodontidae). **Quaternary Research** 72:364-370.

CULTURAL RESOURCE SUMMARY

In conformance with the California Environmental Quality Act (CEQA), an Environmental Impact Report (EIR) was prepared associated with the General Plan Amendment for the Holly Seacliff Property in 1989. The Holly Seacliff Property was a 768-acre parcel located within northwest Orange County in the City of Huntington Beach. Mitigation Measures were listed for Archaeology and Paleontology. Over the last two decades the Holly Seacliff Property has been investigated for archaeology, history and paleontology in compliance with the Mitigation Measures outlined in the EIR. The majority of this work was carried out by Scientific Resource Surveys Inc (SRSINC) for Pacific Coast Homes in anticipation of future development. This Cultural Resource Research and Records Check Report provides an update on resources located within the previous Holly Seacliff Property.

Updated Archaeological Information. A thorough investigation of all archaeological sites around Bolsa Bay was conducted by SRSINC from the 1990s through the 2000s. A total of 23 sites surround Bolsa Bay with 11 sites on Bolsa Chica Mesa and 12 sites on Western Huntington Mesa. The sites all hug the mesa edges emphasizing a concentration on coastal resources. None of the Huntington Mesa sites have ever been recorded inland from the embayment. None are known in the project area. All are about a mile west of the Project Site.

Updated Historic Information. SRS historian examined on-line resources and other research materials to provide information on historic resources within the Holly-Seacliff study area. Most significant was the Holly Sugar Factory at the northeast corner of Garfield and Main opposite the Project Site which is discussed here. The Factory does not extend onto the Project Site however a 1924 aerial photograph and 1922 Sanborn Fire Insurance Map do indicate that a 10-room boarding house and garage, grocery, and oil well were on the Project Site at that time. These structures were located where DeGuelle Glass Company is today and no longer exist on the property.

The existing commercial/manufacturing building on the site was built in 1961 and has undergone various tenant improvements, additions, and exterior modifications such as awning and garage doors. The building does not consist of a historic resource because it has been used for typical commercial/manufacturing uses, which are not of historical significance. There also are no architecturally important aspects to the building. Additionally, the building is not associated with an individual of local, regional, state, or national historical significance. Therefore, there would be no known impacts related to historic resources.

Updated Paleontological Information and Records Check. Extensive studies have been completed by the SRS paleontologist as part of several development projects during the 1990s and 2000s on Huntington Mesa who has summarized this information here. The current scope of work for this report included a paleontological records search through the Natural History Museum of Los Angeles County's Vertebrate Paleontology Section, a literature search, a review of geological maps, and impact analyses that are documented in the text. Geologic mapping shows that the Project Site lies in "old paralic deposits undivided (late to middle Pleistocene" (Qop). This means that late to middle Pleistocene deposits laid down on the landward side of a coast, in shallow fresh water subject to marine invasions, underlie the shallow disturbed layer at the surface. Both freshwater and marine fossils can be preserved in such deposits.

CULTURAL RESOURCE MITIGATION MEASURES

Archaeology. Ground disturbing activity within the study area should be monitored by a qualified observer assigned by the Principal Investigator/Archaeologist to determine if significant prehistoric/historic deposits, (e.g. foundations, trash deposits, privy pits and similar features) have been exposed. The monitoring should be on a full-time basis but can be terminated when clearly undisturbed geologic formations are exposed, usually three to five feet below the surface.

It is not anticipated that prehistoric archaeological materials will be uncovered during grading activities since prehistoric sites within the area are confined to the bluffs over one-mile distant from the project area. Historic material may be encountered anywhere within the Holly-Seacliff property, but the area around the old Holly Sugar Refinery is probably more sensitive than the balance of the project area. Appropriate cultural resource materials uncovered during the construction process should be collected and analyzed for significance.

Details regarding monitoring, collection and analysis should be detailed in an Archaeological Mitigation and Monitoring Plan (AMMP) prior to the issuance of a grading permit. The plan should be prepared by a City-Approved Archaeologist who meets the Secretary of the interior Standards for both Archaeology and History. The Plan would include protocols for mitigation of any finds through a Research Design and Recovery Plan outlining significance testing of the inadvertent finds, laboratory analyses, curatorial requirements and reporting requirements. The Plan also includes a Stop Work Order which would be in effect within 50 feet a find while the find is assessed by both Archaeologists and Native American Monitors.

If Human Remains are uncovered no further disturbance shall occur until the County Coroner, who is notified immediately, makes a determination according to origin and disposition of the materials pursuant to Public Resources Code Section 5097.98. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC) which will notify a Most Likely Descendant (MLD) from the appropriate tribal group. The MLD shall complete an inspection of the find and recommend removal and non-destructive analysis of the human remains or preservation in place which may require an alteration of the project plans.

Paleontology. A City-approved Paleontologist shall be retained to observe grading activities during grading or trenching activities that cut into the San Pedro Sand or the Quaternary marine terrace units. Prior to issuance of permits the Paleontologist shall prepare a Paleontological Resource Impact Management Plan (PRIMP) to orient the protocols for monitoring and fossil recovery. Measures 6 through 10 of the Holly-Seacliff Specific Plan should be incorporated in the PRIMP as described below. Enforcing the PRIMP should reduce the Project impact to paleontological resources to a less than significant level.

The Paleontologist shall also be present at the pre-grade conference, shall establish procedures for paleontological resource surveillance, procedures for temporarily halting and redirecting work to permit sampling, identification and evaluation of fossils. If the resources are deemed to be significant, the paleontologist shall determine appropriate actions, in cooperation with the applicant, which ensure proper exploration and/or salvage. In areas where fossils are abundant, full-time monitoring and salvage effort will be necessary (8 hours per day during grading or trenching activities). In areas where no fossils are being uncovered, the monitoring time can be less than eight hours per day. The paleontologist should be allowed to temporarily divert or direct grading operations to facilitate assessment and salvaging of exposed fossils. Collection and

processing of matrix samples through fine screens will be necessary to salvage any micro-vertebrate remains. If a deposit of micro-vertebrates is discovered, matrix material can be moved off to one side of the grading area to allow for further screening without delaying the developmental work. All fossils and their contextual stratigraphic data should go to an institution with a research interest in the materials.

APPENDIX- RECORDS CHECK

NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY (LACMNH)

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collectionse-

mail:

paleorecords@nhm.org

SRS INC/ SRS CORP
Attn: Nancy 'Anastasia' Wiley

February 21, 2022

re: Paleontological resources for the SRS JOB #1816 Project

Dear Nancy:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the SRS JOB #1816 project area as outlined on the portion of the Seal Beach USGS topographic quadrangle map that you sent via e-mail on February 10, 2022. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County (NHMLA).

Locality Number	Location	Formation	Taxa	Depth
LACM IP 17427	NE of the intersection of 1st St and Hwy 1, Huntington Beach	Unknown formation (Pleistocene; dune deposits)	Invertebrates (uncatalogued)	Unknown
LACM VP 7657-7659	Ellis Avenue & Patterson Lane, Huntington Beach	Unknown Formation (Pleistocene; gray siltstone)	School shark (*Galeorhinus*), eagle ray *(Myliobatus*), goby (Lepidogobius, Leptocottus), midshipmen (Porichthys), croaker (Seriphus), flatfish (Citharichthys), cusk-eel (Otophidium), skate (Raja), angelshark (Squatina), sculpin (Cottidae)	150 - 350 feet bgs
LACM IP 23657	Huntington Central Park West	Unknown formation (Pleistocene; sands)	Invertebrates	Surface

LACM VP 7366, 7422-7425, 7679	The Huntington Beach Urban Center Sand Borrow Area, N of Pacific Coast Hwy and W of Huntingt	Unknown formation (Pleistocene, sands)	Legless lizard (*Anniella*), tree frog (*Hyla*), gopher snake (*Pituophis*), garter snake (Thamnophis), kingsnake *(Lampropeltis)*, ring-necked snake *(Diadophis*), garter snake (*Thamnophis*), long-nosed snake (*Rhinocheilus*), coachwhip (*Masticophis*), salamander (*Enatina*), slender salamander (*Batrachoseps*), skinks (*Plestiodon*), alligator lizard (*Gerrhonotus*), toad (*Bufo*), side-blotched lizard *(Uta*), spiny lizard (*Sceloporus*), climbing salamander (*Aneides*), turtle (*Clemmys*); quail (*Callipepla*), rail(*Rallus*); vole (*Microtus*), pocket gopher (*Thomomys*), shrew *(Sorex*), kangaroo rat (*Dipodomys*), cottontail rabbit (*Sylvilagus*), mole (*Scapanus*), harvest mouse (*Reithrodontomys*), deer mouse (*Peromyscus*), pack rat (*Neotoma*), chipmunk (*Eutamias*), bat (Chiroptera), Mammoth *(Mammuthus*), horse (*Equus*), bison (*Bison*); stickleback (*Gasterosteus*), houndshark (Triakis); Land snails (Gastropoda)	Unknown

VP, *Vertebrate Paleontology;* ***IP,*** *Invertebrate Paleontology;* ***bgs,*** *below ground surface*

This records search covers only the records of the NHMLA. It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

Alyssa Bell, Ph.D.
Natural History Museum of Los

Angeles Countyenclosure: invoice