

Our Ocean Backyard — *Santa Cruz Sentinel* columns by Gary Griggs, Director, Institute of Marine Sciences, UC Santa Cruz.

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Ships of cement



The SantaCruzCement taking on a load of dry cement at the former wharf below the cliffs in Davenport opposite the cement plan.

Santa Cruz County is probably one of the only places around that has had three large “cement” ships in its coastal history, none of which was made solely of cement. All of the ships dated from the early part of the last century, and each used for very different purposes.

One of the natural resources of the Santa Cruz Mountains’ that was exploited early on was limestone, actually marble, a basic raw material for making cement. When the Davenport cement plant was being constructed in 1905, there wasn’t yet a railroad up the north coast, but it wasn’t long until trestles were built across the canyons and tracks were laid. A direct rail connection up the coast to San Francisco was never completed, so cement had to be transported through a longer and more indirect route, south past Watsonville, through Chittenden Pass, and then north to the bay area.

An idea was hatched, which seemed like a great solution at the time; transport the cement by ship directly to Stockton where it was to be offloaded. So as only engineers can, a pier was boldly designed and constructed in the early 1930s starting from the sea cliff opposite the cement plant. A pile driver was lowered down the cliff and steel piles were driven into the seafloor. These were then encased in concrete to resist attack by salt water. Ultimately a 2,300-foot long pier was completed, although wave damage during construction led the engineers to turn the outer end of the pier northerly into the swell, hoping to reduce the wave impact. The pier had two 12-inch diameter pipes for loading dry cement as well as a 3-inch line for water and a 6-inch pipe for fuel oil. Because the pier intersected the coastline part way down the sea cliff, a tunnel was constructed completely through the cliff to connect with the silos where the dry cement was stored on the opposite side of the highway.

The *SantaCruzCement* was a ship specially outfitted to carry cement, and would be tied up to a series of buoys. Cement was loaded through a flexible hose from the end of the pier as wind and wave conditions were nearly always too rough for direct tie up to the pier. The ship was in service for a little over 15 years until wave conditions were deemed to dangerous to ship cement safely by sea. Wave impact over the subsequent decades has progressively eaten all of the piles but the four innermost sets, which are still visible, as are the large steel doors in the sea cliff at the mouth of the tunnel.

About 18 miles southeast of Davenport lies the county's second "cement ship". To be honest, however, it should be called the concrete ship as it was constructed of concrete, reportedly from Davenport, rather than cement. This vessel, the *SS Palo Alto*, was designed as an oil tanker and was built to be part of a fleet of concrete ships built in 1918-1919 for the war effort. World War I ended in 1918 before the ship was completed, however, and ultimately it was sold as surplus to the Seacliff Amusement Company of Nevada and towed from San Francisco to Seacliff Beach in 1930.

It was sunk in shallow water with its bow facing into the sea, and a 600-foot long pier was built to connect its stern with the shore. For the next two years, it was an amusement center and party boat, with a ballroom, restaurant, concessions stands, and even a swimming pool was built. The large waves of the winter of 1932 broke the ship's back, however, which led to closing it down and the beginning of its economic decline. The ship's mechanical equipment and superstructure were sold a few years later to a local wrecker for scrap and salvage. In 1936 the State of California in a bargain sale bought the ship's hulk for one dollar and incorporated

it into Seacliff State Beach, where it became a favorite fishing platform for decades.

Storms ultimately cracked the ship further, and due to continuing deterioration, the ship itself was finally closed. In the spring of 2005, 75 years after being sunk in shallow water, oil found on wildlife in the area was traced back to the ship. Clean up operations were initiated. No oil was known to have spilled but birds were believed to have come into contact with the oil by entering the ship's cracked hull while diving underwater.

A little known fact that my friend Sandy Lydon shared with me recently, the *SS Palo Alto* had a concrete sister ship, the *SS Peralta*, also built as an oil tanker for the war effort, but that never saw service. It was converted to a fish cannery, used in Alaska for a while, but also anchored at various points around Monterey Bay buying fish and canning it right on board in 1926. This caused grief for the local canneries in Monterey and eventually ended up in court. In 1958 the *SS Peralta* was purchased by Pacifica Papers to be part of a giant floating breakwater built to protect a pulp and paper mill on the Powell River in British Columbia. The ship remains there today, and at 420 feet long is believed to be the last of the World War I fleet still afloat and also the largest concrete ship afloat.