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*Mark Sanders spent 25 years planning his marina in South San Francisco Bay. Westpoint Harbor is the first new marina in decades and targets larger boats, which until its opening had no where to dock in the area.*

## Marina Profile: Mark Sanders' Westpoint Harbor

by Robert Wilkes

**W**hen Mark Sanders told the U.S. Army Corps of Engineers he planned to build a new marina in South San Francisco Bay, they had one question: "Are you crazy?" Waterfront development in the Bay is cited as second only to the nuclear power industry in terms of legislative difficulty. Many counseled him to save his money.

Sanders began researching the idea of a marina in Redwood City in 1988. "I felt sure a marina at this location would be successful," Sanders said. "I've been a resident and boater in the area for decades, and was distressed to see South Bay boatyards and marinas closing one-by-one. Recreational boating was fading due to the high value of land (in the middle of Silicon Valley), the difficulty of maintenance dredging, and the lack of suitable sites. The South Bay once boasted a dozen boatyards but none remain. Moreover, as a director for Marine Science Institute (a non-profit organization that teaches marine science to school kids), I was on a mission to find a permanent home for the Institute and stem the decline of boating at the same time."

Sanders attended the well-known Marina Development course at the University of Wisconsin and quickly learned that his notion of three years and 10 million dollars to build Westpoint Harbor was way off. "All developers are optimistic," Sanders said, but he never imagined it would take 25 years to complete just the marina part of the project.

In 1990, Sanders was able to purchase part of a pond from Leslie Salt (now Cargill). The site was used to store chemicals that remain after harvesting table salt (Halite) from sea water, which is called bittern. Once the bittern was removed the more difficult problem remained. The site was 35 to 40 feet of saturated Bay mud right down to hardpan, surrounded by an earthen levee. Geotechnical analysis predicted it would take 35 years for the site to fully dry and settle, and worse, the site was on a channel choked with abandoned and sunken vessels, including a 120 foot tug!

Another layer of difficulty was the dozen federal, state and local agencies with jurisdiction over the Bay, each with its own requirements, which often conflict with each other.





*Single-piece finger piers with rounded ends and warm wood trim make up the clean lines of the floating concrete docks. The rounded piling are internally mounted, and an HDPE ring, mounted under the dock, acts as a bearing and scrapes the pile clean of shell life.*

The challenge was getting them all to say *yes* at the same time (one agency actually regards marinas and boats as undesirable fill that must be mitigated!) Despite these obstacles and with the support of a wide variety of maritime and environmental organizations, Sanders was able to get the project permitted in 2003.

## Market Analysis

“San Francisco Bay is the largest land-locked harbor in the world,” Sanders said. “It has nearly 60 marinas, mostly old with slip mixes heavily weighted toward small boats (at least small by today’s standards, not so in the 50s). Municipal marinas are often prohibited from displacing smaller slips with larger berths, and many marinas loathe to face the legislative challenges and expense to rebuild and update facilities.”

Westpoint Harbor is the first new private marina in the Bay in decades, and targeted larger berths from 36 to 120 feet. Cynics noted there are few large recreational vessels in the Bay, but Sanders correctly reckoned this was partly because

there are so few places to berth them.

Sanders cultivated allies who stood with him at the interminable permitting meetings, including individuals from Stanford University and the Audubon Society and environmentalists such as former Manhattan Project physicist Dr. Ralph Nobles. There was no public opposition to his project; nonetheless, the permitting process took fourteen years.

Sanders retired from a long career in technology (he had been an executive at Ampex Corporation) and as it became clear this project was not going to happen quickly, he was recruited out of retirement and joined Pinnacle Systems as CEO. Over the next decade the company grew from 21 to more than 1,000 people, went public and became a powerhouse in special effects and graphics for the television industry with revenues of \$500 million. He retired again when the last permit was in hand. This happy circumstance allowed Sanders to set his sights higher. He resolved not just to build a marina, but a great marina.

His research showed the best marinas are equal parts water and land, with shore-side amenities necessary for a full-service marina. This was consistent with his target market of larger boats and with the demographics of Silicon Valley.

“Larger vessels change the dynamics of boating and affect the makeup and quality of the marina, as well as amenities needed to serve them,” Sanders said. “Westpoint Harbor’s exceptional climate makes boating a year-round activity, and boaters spend a great deal of time aboard, even in their slip. And larger vessels often can reach cruising destinations faster by water than car!”

## Construction

Construction began in 2003, and the first task was to tackle the 35 to 40 feet of supersaturated mud. A frequent traveler to Europe, he often visited Holland. There he met with experts on how to rapidly “dewater” deep mud. He finally employed a Dutch process called “wicking,” essentially driving thousands of flattened tubes (called wicks) straight down to hardpan with an associated drain and pump system. Dirt is piled on top (called a surcharge) to press trapped water to the surface. In all, 50,000 wicks 40 feet long were installed. The site was 90 percent dewatered in less than a year and fully settled in 36 months. This allowed the heavy construction equipment for excavating the 26-acre marina basin to operate. The wicking process eliminated long-term settlement issues, which often plague shore-side developments. The excavated mud (600,000 cubic yards) was dried and compacted and used to form the 24 acres of uplands for the shoreline developments.

Since the mud was free, it was an easy choice to add a few extra feet of elevation to bring the final surface well above projected sea level rise height, more than 10 feet above mean sea level. When the excavation was complete in 2006 and the channel was breached to fill the basin, Sanders had created 26 new acres of San Francisco Bay and 24 acres of new waterfront from salt ponds and mud that was regarded as impossible to build on.

The marina is protected from wind and waves by Greco Island, a wildlife refuge surrounding the windward side of the



harbor. "This permits a 300-foot wide entrance to the marina," Sanders said, "and allows a complete exchange of water each tidal cycle. And the shape and depth of the harbor reduces choppiness by cancelling reflected waves. Together with a universal pumpout system, we have an exceptionally clean marina—so much so that Stanford University hosts its national triathlon in Westpoint Harbor each year."

## Docks

Sanders was determined to build a marina designed from the boater's perspective. As an active sailor he visited marinas around the world and knew what worked and what didn't. After talking with dozens of manufacturers, he chose concrete docks from Bellingham Marine. "I had ideas that others had not tried before," Sanders said, "and went in thinking concrete docks are 'old tech.' But Bellingham Marine had answers to every question and said, 'Let's go to work and figure out how to do it.'"

Rounding the end of the dock fingers was high on Sander's list of boater-centric innovations. "Removing those hard corners takes the terror out of docking," he said, "often the scariest part of boating. Instead of avoiding the sharp corners, which can be so damaging, boats can lay against the rounded end and slide right into the slip!"

Bellingham Marine also built single-piece fingers up to 55 feet long to avoid twisting, sagging or hogging. Docks have internal round piles with circular pile guides under the deck

for a clean look. Sanders wanted to eliminate external pile guides, which can damage hulls, injure bare feet and snag sails and lines. Bellingham Marine designed HPDE ring guides that have the added benefit of silently keeping the piles free of mussels and shells. Finally, Bellingham installed special wood-stained glu-lam walers eliminating the characteristic hatch marks and copper-green color of pressure-treated wood.

The marina was partially completed and opened in 2008. Construction continued and the marina is now in its final configuration with 416 slips from 36 to 120 feet, a 1,000-foot guest dock, and a dozen catamaran berths. Phase II, now in progress, is adding a fuel dock and a full-service boatyard. Phase III will provide a retail area with a 1,000-foot boardwalk, restaurants, yacht club, marine store, rowing center and other marine-oriented businesses.

Sanders was not interested in simply building docks out into the Bay with a parking lot. "Even though that could be the most profitable path," he said, "our vision for Westpoint Harbor is a maritime resort for boaters, with extensive facilities to support recreational boating from standup paddleboards, kayaks and kiteboards to superyachts. And, of course, we expect to see future boaters and others who just want to look at boats."

## Accents and Amenities

Some innovations Sanders wanted, such as rounded fingers, are now more commonplace in the marina industry. In his "a marina from the boater's perspective" logic, little things are important: hardwood accents help create a premium-marina impression, dockboxes are on the upwind side so boats are unlikely to damage them, and the facility has a sophisticated Wi-Fi system.


Westpoint Harbor is a certified Clean Marina and the only harbor in Northern California to offer a pumpout at every slip. "It's so easy, everyone uses the system," Sanders said. "Routine water tests show the marina is cleaner than background levels for the Bay. Noticeably absent in the marina are neglected or derelict vessels. Westpoint harbormasters inspect all vessels prior to arrival in the harbor, catering only to active boaters with well-maintained vessels.

In addition to free Wi-Fi and a dedicated phone/DSL line to every slip, Westpoint Harbor offers a premium Gigabit-capable Wi-Fi system. "Wi-Fi is essential," Sanders said, "and is often a source of complaints for marinas. We designed our system such that there are no blind spots and no bandwidth limit. The system has a range of up to a mile and not susceptible to the normal 'slump' in the evening when web activity is at its peak."

## Microclimate

Why Redwood City? It's the climate. "We have classic Mediterranean weather; rain in winter, dry in summer." Sanders said, "We average 66 degrees in winter and 77 degrees in summer. "Often, when San Francisco is a chilly 60 degrees and drizzly, Westpoint enjoys short sleeves weather just 20 miles south." ↓

*Robert Wilkes writes about the marina industry from Bellevue, Washington.*



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