



**FOR IMMEDIATE RELEASE**

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Contact: Randy Quezada, Director of Communications: [media@sfport.com](mailto:media@sfport.com)

**\*\*\* PRESS RELEASE \*\*\***

**Port of San Francisco, Smithsonian Environmental Research Center Launch Living Seawall Pilot**

**San Francisco, CA** - The Port of San Francisco and the Smithsonian Environmental Research Center (SERC) announced today the launch of the San Francisco Living Seawall Pilot, a minimum two-year study with three different installation sites located along the Embarcadero Seawall.

“The Living Seawall Pilot is another important opportunity to demonstrate the Port’s commitment to engineering with nature resilience solutions. We will test and study innovative concepts that draw from research conducted around the world, from Seattle to Sydney, to learn how we can make San Francisco’s seawall more ecologically friendly in the future,” said Elaine Forbes, Executive Director of the Port of San Francisco. “We are honored to have the Smithsonian Environmental Research Center as partners on the Living Seawall Pilot, which represents a new ecological approach to earthquake safety and flood risk reduction here in the Bay Area.”

The Living Seawall Pilot will test the use of textured tiles made with special materials designed to promote biodiversity. These tiles may also benefit native species and help improve habitats along San Francisco’s Bay waterfront. Target native species include the Olympia oyster, the common rockweed, and the Pacific herring. The Living Seawall Pilot is strictly limited to learning from existing seawalls and does not involve any construction of new seawalls or living shorelines.

Traditional seawalls are barren, exposed concrete surfaces unlike natural marine habitats and may benefit invasive species over native species. The Port’s Living Seawall Pilot will test the use of textured tiles made with special materials designed to promote biodiversity and may benefit native species, and help improve habitats along our Bay waterfront.

“The focus of the Living Seawall Pilot to test strategies to promote native species will add to a growing body of research around ecological seawalls,” said Dr. Andrew Chang of SERC. “SERC is proud to be a partner with the Port on this innovative study that is the first of its kind within the San Francisco Bay. While the Bay Area has had a strong focus on ecological approaches, most of these efforts have focused on land-based solutions, such as marshes and coarse grain beaches. There has been less attention to opportunities to introduce living seawalls.”

The team will install 90 one-foot square tiles and six large tiles at three different locations: Pier 45 Breakwater, Agricultural Building Seawall, and South Beach Harbor East Breakwater. They selected these sites within the Embarcadero Seawall to build on the findings of previous studies and generate data specific to San Francisco Bay. Whereas previous studies have generally focused on a single location or have chosen multiple sites with similar conditions, the sites for the Living Seawall Pilot offer different conditions for tide depths, wave exposure, and levels of water salinity for comparison. The Port's Maintenance team worked closely with the Living Seawall Pilot's SERC team members to develop the installation plan, including design and fabrication of the frames and platforms for observing the living seawall.

The Living Seawall Pilot is being conducted under the Embarcadero Seawall Program, a Port-led citywide effort to address the urgent seismic risks and increasing flood risks due to climate change facing the Seawall and create a more sustainable and resilient waterfront. The Living Seawall Pilot represents a new ecological approach to earthquake safety and flood risk reduction within the Bay Area, and findings will provide information and guidance that can help the Port include ecological enhancements within the [Embarcadero Early Projects](#) being considered to address the areas of highest risk.

San Francisco's Embarcadero Seawall is a rock and concrete wall that stretches over three miles, between Fisherman's Wharf and Mission Creek, and is one of the city's oldest pieces of infrastructure. It protects more than \$100 billion in assets and annual economic activity and supports many of the city's iconic destinations and parks which drew 24 million visitors to the waterfront annually before the pandemic. Regional transportation infrastructure supported by the Seawall include BART, Muni, and ferry networks, and more than 50 emergency assets depend on the Seawall, which is also a critical emergency response and recovery area.

The Living Seawall Pilot will run for a minimum of two years and will cost approximately \$1 million for planning and design, construction, monitoring and reporting, and removal once the pilot study is complete. Funding for the Living Seawall Pilot is provided by Proposition A funds, and the Port continues to seek grant funding for the monitoring program. Data will be available for design of future projects within the Bay.

Findings from the Living Seawall Pilot will be used as part of the Port's waterfront-wide commitment to Engineering With Nature. Engineering with Nature is an initiative of the U.S. Army Corps of Engineers (USACE) defined as: "The intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental, and social benefits through collaboration."

Fabrication of tiles and panels is underway, and installation will happen this summer.

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