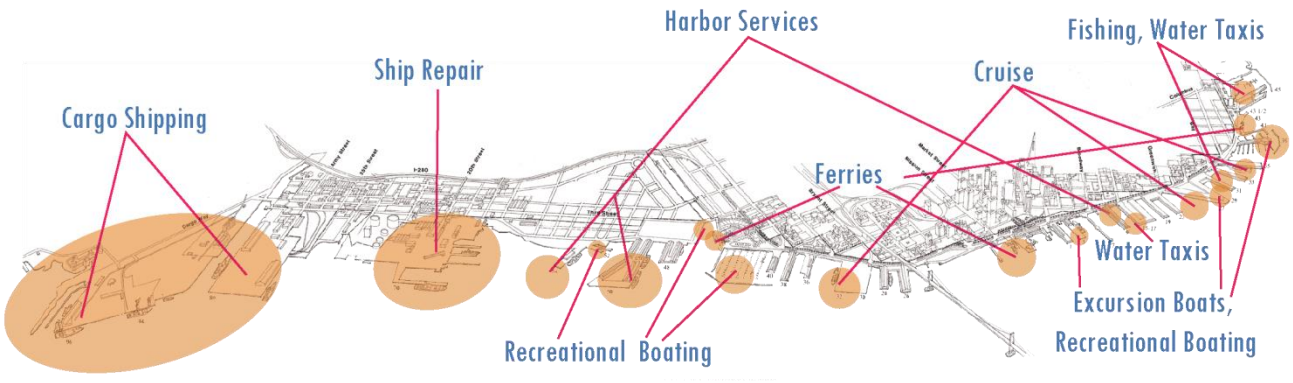
PORT OF SAN FRANCISCO WATERFRONT PLAN UPDATE

2/10/2016

OVERVIEW OF MARITIME COMMERCE AND WATER-DEPENDENT USES

MARITIME INDUSTRIES



This report provides an overview of the maritime industries and water-dependent uses that make their home at the Port of San Francisco. It is intended to provide the public with a general understanding of how the Port supports, plans for, and protects these key public trust uses on behalf of the State of California. An overview of maritime land use history and planning is followed by a summary of common operational needs and services, and concludes with 10 industry summaries. An appendix at the end of this report provides definitions for many maritime terms.

Cover Image: KMD Architects

OVERVIEW OF MARITIME COMMERCE AND WATER-DEPENDENT USES

> **"Port lands should continue to be reserved to meet the current and future needs of cargo shipping, fishing, passenger cruise ships, ship repair, ferries and excursion boats, recreational boating and other water-dependent activities."**
>
> ***A Working Waterfront***, Port of San Francisco Waterfront Land Use Plan

A Rich Maritime History

The Port of San Francisco has a rich maritime heritage, reflected, in part, by the iconic pattern of finger piers along the Northern Waterfront. From the early 1900s through World War II, these piers and their bulkhead buildings were dominated by industry, maritime operations and freight rail terminals, during an era when break-bulk shipping flourished. Post World War II, the demand for such facilities began to decline and with the advent of containerized cargo, these uses shifted to the Southern Waterfront. Piers 80-96 have become the Port's primary cargo terminals where access to freight rail, the interstate highway system and large swaths of land remain vital to their operations.

Today, the cargo terminals along with ship repair activities at Pier 70 are carefully managed within the context of the City's long-range plans to balance industrial preservation and new development in southeast San Francisco. The Port has partnered with the community on an eco-industrial strategy for its cargo terminals, oriented to co-locate industries that benefit from their proximity to cargo terminals, support re-use for cargo purposes, and include environmental management practices that enhance the surrounding neighborhood and Bay shoreline.

In the meantime, the Port's former break-bulk piers in the Northern Waterfront have been slowly repurposed for commercial, visitor-serving, and public access uses alongside other long-standing maritime activities. In some locations, such as Fisherman's Wharf or the new James R. Herman Cruise Terminal at Pier 27-29, commercial fishing or passenger cruises have become anchors for a thriving tourist economy. In other areas, maritime support services such as tug and tow operations and the San Francisco Bar Pilots operate alongside new commercial and recreation uses on finger piers. At the Ferry Building, commuter and recreational ferries serve Bay Area cities alongside the thriving ground floor market hall and farmers market.

Thus, the Port of San Francisco remains one of the most diverse ports in the world. Unlike ports that specialize in a few industries, the Port oversees a broad portfolio of 10 maritime industries, each with their unique business needs and operations. The Port's primary maritime assets include two cruise terminals, ferry landing facilities, excursion docks, a commercial fishing harbor, ship repair and drydock facilities, recreational boat marinas, boat-launch facilities, and 145 acres of cargo terminals.

The Port's Maritime Division manages and markets these diverse assets, promoting Port maritime facilities to potential and existing customers, while ensuring compliance with federal security mandates and advancing environmental stewardship. Balancing the competing interests of maritime and commercial tenants, public trust responsibilities to the people of the State, and responsibilities to the people of San Francisco has always been a challenge.

Prioritizing Maritime in Port Land Use Planning

It was, in part, out of concern for protection of these maritime industries that San Franciscans passed Proposition H in 1990, calling for creation of the Port of San Francisco Waterfront Land Use Plan (Waterfront Plan).

Phase I of the 7-year planning process that led to Waterfront Plan adoption in 1997, focused on analyses of the Port's maritime industries to ensure that the Waterfront Plan reserved ample property for the existing and future land use needs of the Port's water-dependent activities.[1] Piers 15-17, 19-23 and 27-29 were designated "Transitional Maritime" facilities, recognizing that cargo shipping and cargo warehouses were unlikely to continue over the long-term. There was also consensus that the Port's seawall lots west and south of The Embarcadero should be developed in a manner consistent with surrounding neighborhoods to generate needed revenue to operate and maintain the Port and its growing amount of public space.

Maritime Uses are protected in several ways in the Waterfront Plan:

- **Chapter 2, Goals of the Waterfront Plan** Includes a Working Waterfront goal to retain and expand historic maritime activities.

- **Chapter 3, General Land Use Policies for Existing Maritime, Transitional Maritime and Maritime Expansion Uses** Provides guidance for sustained maritime operations and compatibility with other uses. Chapter 3 also includes special interim use provisions to allow non-maritime leasing of Port land, while preserving flexibility to make land available for maritime purposes when needed.

- **Chapter 4, Subarea Plans** Sets policies and development standards for specific areas and sites, including maritime uses that are considered best suited for these sites, and designates locations for "Waterfront Mixed Use Development" that may include new and enhanced maritime facilities.

Since adoption of the Waterfront Plan, the Port has reinforced its maritime priorities through community partnerships, policy statements and administrative efforts, including formation of a Maritime Commerce Advisory Committee, and adoption of a Maritime Industry Preservation Policy that defines and reserves

[1] **Water-dependent Activities** Activities, businesses or industries which depend on a waterfront location to function, such as cargo-related activities, berthing of historic, ceremonial or other ships, ferry and excursion boat operations, fishing industry uses, maritime support uses, recreational boating and water use, ship repair, and water taxi docking.

facilities for ship and deep vessel berthing at the Port. The Port has also developed community partnerships to advance the creation of a San Francisco Bay Water Trail (Bay Water Trail), described below.

Maritime Commerce Advisory Committee

The Maritime Commerce Advisory Committee (MCAC) was formed in 1999 to support and advise the Port on the needs of its maritime industries. The MCAC is comprised of representatives from organized labor, maritime terminal operators, cargo shippers, cargo warehousing, ship repair, excursion operators, harbor services, and other maritime industrial users. The MCAC has been a staunch advocate and defender of the Port's primary mission, focusing most recently on:

- Port's 2009 Maritime Industrial/Cargo Plan
- Support for BAE systems at Pier 70, ship repair lease extension
- Preservation of 24/7 truck access to Pier 50 in face of changes in Mission Bay
- Port's Maritime Industrial Preservation Policy, protecting deep water berths and promoting expanded water-taxis service
- Briefings and tours to members of the Planning Commission and Board of Supervisors to further their understanding of the Port's maritime industries

Maritime Industry Preservation Policy

In 2011, the Port Commission adopted the Maritime Industry Preservation Policy to reinforce the Port's maritime mission and preserve the Port's deep-water berths (updated in 2015). By identifying priority vessel berthing sites, the policy encourages new pier use proposals to provide maritime berthing and to avoid conflicts with existing maritime uses. The Exploratorium project at Pier 15 and Pier 17, for example, included significant pier repairs which support deep-water vessel berthing along the pier's eastern end and the berthing and operational headquarters for Bay Delta Tug and Tow harbor services. The Maritime Industry Preservation Policy is available at: http://sfport.com/mipp.

San Francisco Bay Water Trail

In 2005, the State established the San Francisco Bay Water Trail, a network of water recreation sites for non-motorized, small boats such as kayaks, canoes, dragon boats, stand-up paddle and wind-surf boards (human-powered boating) so recreational boaters can safely enjoy single and multiple-day trips around San Francisco Bay. Within the broad mix of its maritime and water-dependent uses, Port efforts seek to balance industrial, commercial and recreational maritime demands and services.

Ongoing Maritime Operational Needs and Services

The Port manages dredging, homeland security, and environmental management projects and operations to support and maintain its maritime operations. These activities are subject to costly, complex and ever-changing ecological, health and safety regulations and protocols.

Dredging

Although the Port is a naturally deep harbor, annual dredging is required to maintain berth and channel depths to support many of the Port's maritime industries. Regulations governing dredging are extremely complex and expensive, and the costs of dredging escalate every year, mainly driven by the rapidly increasing costs of disposing dredge material and planned increases in dredging activity.

The Port is authorized to conduct maintenance dredging under 10-year permits from the U.S. Army Corps of Engineers, the San Francisco Bay Conservation and Development Commission (BCDC), and the San Francisco Regional Water Quality Control Board. Over the next five years, the Port expects to require maintenance dredging at several Port facilities including Pier 27, Piers 30-32, Pier 35, Pier 80, Pier 92, Islais Creek, Central Basin, Fisherman's Wharf, Piers 94/96 and others along the San Francisco waterfront. The estimated cost of this maintenance dredging is $28,500,000, which is about 60% higher than the last five-year dredging program. The primary cost drivers are an increase in dredging volume by 40% to accommodate larger vessels, and higher disposal costs associated with regulatory requirements to utilize more beneficial reuse and ocean disposal of dredged materials.

Homeland Security

The Waterfront Plan was completed before creation of new post 9/11 federal Homeland Security requirements which greatly affect the day-to-day management and costs of Port operations. The Port's Homeland Security and Maritime staff works in coordination with the U.S. Coast Guard to administer a 3-level Maritime Security ("MARSEC") program for safety, security and installations at the Port's cruise, cargo and ferry terminals. The Homeland Security staff also works alongside and in compliance with the requirements of several federal, state and city agencies to provide a full array of emergency and disaster planning and response and public safety functions.

Maritime Environmental Sustainability

The Port's environmental staff works alongside other Port Divisions to ensure Port projects incorporate technologies and operational procedures that protect and improve the ecology and environmental condition of the Bay and the City and comply with regulatory requirements. Recent environmental initiatives and implementation measures included in Port maritime industries and operations include the following:

- **Stormwater Design Guidelines (2009)** Low-impact design to manage on-site stormwater runoff, reduce flows to the Bay, and improve project aesthetics (e.g. infiltration swales at cargo terminals that capture and treat stormwater runoff from streets and parking areas)
- **Hyde Street Harbor Fuel Dock Improvements (2001)** Provide safe fueling, sewage pump out, and oil recycling facilities to improve Bay water quality.
- **Pier 45 Drainage Improvement Project (2010)** Intercepts and redirects fish processing waste to the City's sanitary sewer system.
- **Shoreside Power at Pier 27 Cruise Terminal (2010)** Allows cruise ships to switch off diesel generators while in Port.
- **Shoreside Power at Pier 70 Ship Repair Yard (2012)** Supports ship repair for large ocean-going military, government and commercial ships with heavy electrical load requirements.
- **Pier 27 Cruise Terminal (2014)** LEED Silver designated facility incorporates rainwater harvesting, shorepower, and other environmental best practices.
- **Port of San Francisco Cruise Ship Environmental Award Program (2005-2011)** Promotes and recognizes cruise operators that reduce air emissions and water pollution while operating in San Francisco Bay.

Transportation Access

Traffic congestion and access are operational challenges for the Port's maritime businesses and industries, particularly in the Northern Waterfront. The fishing industry and cruise terminal are major industrial operations that require heavy truck loading and access to pier facilities. Whenever possible, these

operations are scheduled during off-peak traffic periods, often very early in the morning before commuters and visitors arrive. However, overall growth in traffic and congestion on the freeway system and local street network remain operational challenges for these and other maritime businesses.

Because the Port generally does not have direct control over transportation operations, close coordination with the City is essential. The Port works on an ongoing basis with the San Francisco Municipal Transportation Agency (SFMTA), the San Francisco Planning Department (Planning Department), the Department of Public Works (DPW), and the San Francisco County Transportation Agency (SFCTA) to plan, design and construct many transportation improvement projects, some of which directly benefit the Port's maritime industries, including:

- **Downtown Ferry Terminal, Phase 1 (2003) and Phase 2 (planned)** Serving the Ferry Building area.
- **Illinois Street Intermodal Bridge (2008)** Providing freight rail and industrial truck access across Islais Creek for Port cargo operations and the Blue Greenway bicycle and pedestrian network.
- **Amador Street extension (2005)** Reducing the volume of Port-bound industrial truck trips on Cargo Way and the Blue Greenway by providing an internal roadway connection between Port cargo terminals.
- **Cargo Way Bikeway (2012)** Providing a two-way bikeway along the south side of Cargo Way, improving bike safety to Heron's Head Park within the cargo terminal area.
- **Taylor and Jefferson Street Projects (2010, 2013)** Improving circulation, roadway and pedestrian improvements for Fisherman's Wharf visitors and tenants.
- **Water Taxi Agreements (Ongoing)** Providing two water taxi operators and water taxi locations at the Port to charter trip and local service along the waterfront.
- **Pier 27 Ground Transportation Area (2015)** Staffing, site improvements, and traffic management to improve cruise terminal transportation access and operations.

The Port and SFMTA are also working on the Embarcadero Enhancement Project to define a concept design for a protected bikeway to shift travel from autos to bikes and improve pedestrian safety along The Embarcadero Promenade. Further, the Port recently completed a transportation survey of its tenants in Fisherman's Wharf and along The Embarcadero to solicit information and feedback on transportation needs and concerns.[2] One of the key comments received was from fish processing businesses in Fisherman's Wharf regarding impacts on business operations associated with navigating through congested conditions to and from Pier 45 and nearby fish processing facilities. Other Port maritime and non-maritime tenants also spoke of challenges receiving deliveries and moving goods along The Embarcadero.

Maritime Industry Profiles

Since the Waterfront Plan was adopted in 1997, the Port has pursued a broad range of maritime investments, including the Hyde Street Pier and Pier 45 fish processing projects, the James R. Herman Cruise Terminal at Pier 27, expanded ferry service at the Ferry Building, ship repair at Pier 70, and cargo industrial uses in the Southern Waterfront. These projects have been met with great enthusiasm, reflecting continued public support for the Waterfront Plan goals for A Working Waterfront and A Revitalized Port. The 10 industry summaries which follow provide additional details.

[2] Memorandum to Port Commission, January 7, 2016, presented at the January 12, 2016 Port Commission meeting; http://sfport.com/transport-survey


Image: Peter Chinn/SFGate

THE PORT'S 10 MARITIME INDUSTRIES

1 | CARGO SHIPPING

The Port's cargo shipping terminals are located in the Southern Waterfront, within the City's remaining industrial area. Pier 80, Pier 92 and Pier 94-96 provide 9 deep-water berths for US Maritime Administration "ready-reserve" ships and cargo ships that carry a variety of cargos. "Bulk" sand and aggregates are the Port's highest volume cargo, providing a strong foundational product that has supported evolution of the Port's Pier 80-96 Maritime Eco-Industrial Center. The Port also continues to support "Break-bulk" (non-containerized), "Roll-on/Roll-off" (vehicles) and "Project" (oversized equipment, construction products) cargo business opportunities at the terminals.

Then

When the Waterfront Plan was approved in 1997, most of the Port's container shipping lines had left San Francisco. San Francisco's peninsula location proved to be inefficient for freight rail access and its terminals were relatively small, two competitive disadvantages compared with Oakland or other west

coast container ports. Technological and global market conditions also added to a dynamic and volatile cargo business environment. By 2005, the Port ceased container shipping operations altogether.

In 2000, the Port turned its focus to import of "bulk" cargo -- aggregate rock and sand -- used in manufacturing concrete and construction materials. The closing of local quarries opened a new market for imported aggregates from British Columbia. In 2001, the Port signed a bulk terminal agreement with Lehigh-Hanson at Pier 94, which led to other improvements and developments, including:

- Receipt of aggregates via ocean vessel rather than from local quarries took 35,000 annual truck trips off local roads and regional freeways.
- Bulk cargo businesses moved closer to the Port for easy access to raw materials; the Port approved leases with Central Concrete (2002) and Cemex (2006) for two new modern concrete plants adjacent to Pier 94.
- Port implemented Illinois Street Bridge (2008) and Amador Street extension (2004) to improve truck, freight rail and intra-terminal circulation, further reducing traffic on Third Street and Cargo Way.
- New jobs, landscaping, environmental and beautification improvements and partnerships among Port, Port tenants and community organizations.

By a far margin, bulk is the highest volume cargo handled at the Port. Over the last 10 years, except during the recession in 2009 and 2010, over one million metric tons of dry bulk materials were handled through the Port. As a result of these developments, the Port refined its strategies to create the Pier 80-96 Maritime Eco-Industrial Center, promoting co-location of complementary maritime and industrial businesses, optimization of resources and product exchange, implementation of green design technologies, including resource recovery and reuse, and providing local jobs and economic development opportunities. In addition to bulk cargo and construction materials, the Eco-Industrial Center includes the Port's liquid bulk export of tallow from the Darling Delaware tallow plant at Pier 92, where rendered animal fats and recycled food oils collected from San Francisco restaurants are processed and shipped for manufacturing into soaps and other products.

Now

The maritime cargo industry in San Francisco continues to be cyclical and volatile, requiring patient and persistent marketing and business development. The Port's natural deep-water berths at Pier 80 and Pier 94-96 remain valuable assets, and Port maritime staff has kept a focus on "niche" cargos that are well-served within the Port's smaller terminal footprint.

The Port Commission and Maritime staffs continue to focus on business development for Pier 80, which can accommodate a variety of different types of cargo. In recent years, Pier 80 has received break-bulk steel shipments, a commodity that is prone to cyclical patterns that follow the highs and lows of the U.S. economy. Other commodities, such as "project cargos" are well suited for handling at Pier 80 for specialized equipment, such as wind turbines, tunnel boring equipment for the Central Subway, and production equipment bound for the Tesla auto plant in Fremont, etc. But these cargos are episodic and cargo volumes have remained very low for the last three years, in part reflective of larger global circumstances. More recently, the Port, working with International Longshore and Warehouse Union labor, is targeting the import and export of automobiles through Pier 80 on "roll-on/roll-off" ships. These operations could include auto equipment installation and detailing services. Depending on the volume of activity, other breakbulk or project cargos could continue to be accommodated at Pier 80.

Bulk cargo operations at Pier 94 continue to be strong, reflecting the Bay Area's robust economy and construction activity. Innovations in concrete manufacturing and construction materials handling promote recycling of leftover and used material, diverted away from landfills. SF Public Works also has an

interest in securing a location near Pier 94 for a concrete and asphalt batch plant to support repair and rebuilding of City streets and sidewalks. The functional benefits of proximate and coordinated operations between the Port's bulk cargo terminal, concrete manufacturers, materials recycling and SF Public Works street repair program are supported in the Port's strategy for the Maritime Eco-Industrial Center.

2 | CRUISE

Since September 2014, most cruise ships sailing under the Golden Gate Bridge have berthed at the James R. Herman Cruise Terminal at Pier 27. This $115 million, LEED Silver project was designed in coordination with the adjacent 2½-acre Cruise Terminal Plaza. On multiple-ship days, the Pier 35 Cruise Terminal also remains in service. San Francisco's cruise numbers have grown steadily in recent years: from 41 cruise ships and 112,000 passengers in 2010, to 82 ships and a record 297,000 passengers in 2015. The forecast for 2016 is 83 ships and 310,000 passengers.

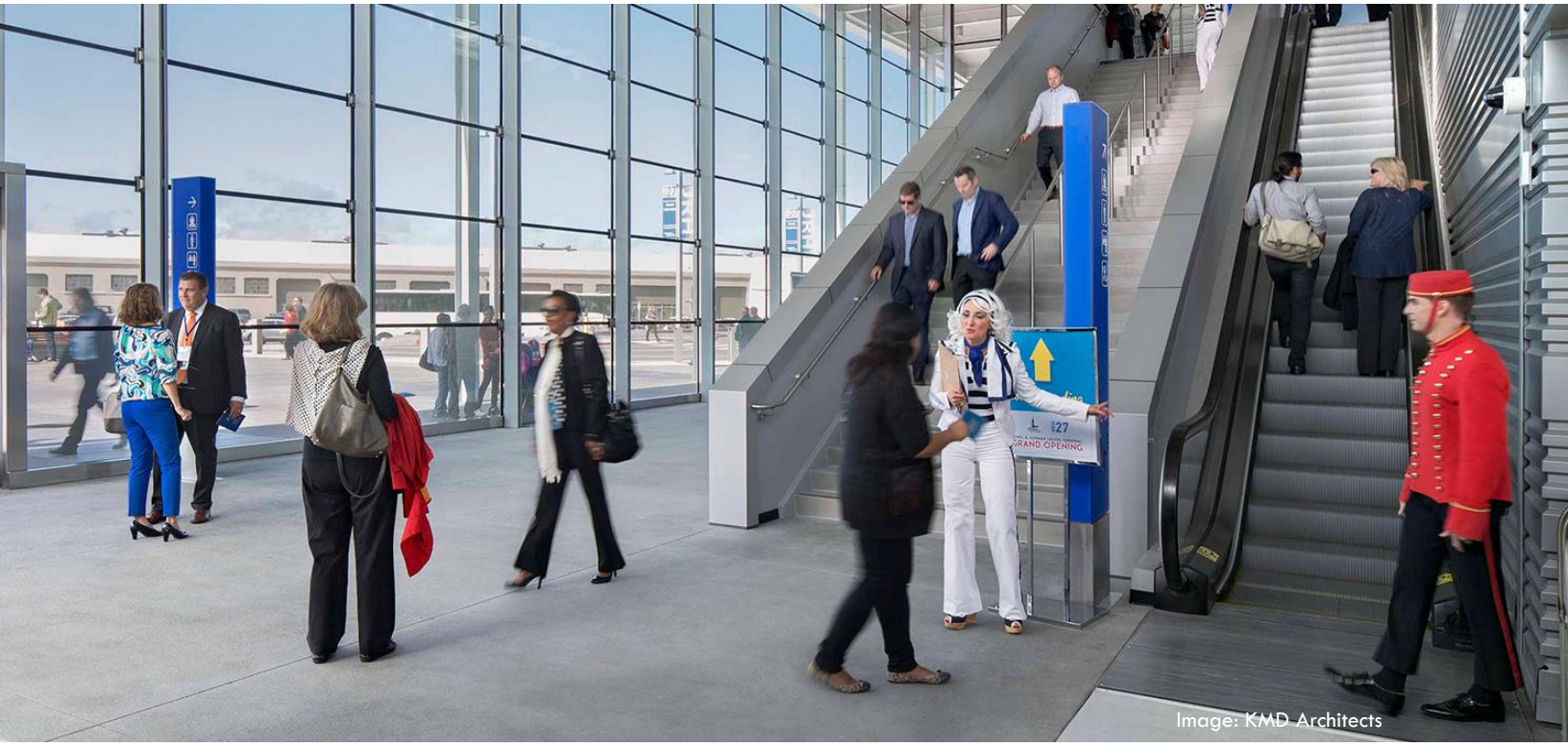
Then

The Port's efforts to develop a modern cruise terminal pre-dated the 1997 Waterfront Plan. The Port's two-berth terminal at Pier 35 was serviceable, but the finger pier's narrow aprons and tight working spaces constrained baggage handling, ship provisioning, and passenger circulation. Cruise ships were growing larger in terms of size and passenger capacity, and the Port anticipated expansion in its cruise business. In response, the Port took the following steps to optimize Pier 35 and develop a second cruise terminal:

- **1998-2006** Partnered with developer Lend Lease on the Bryant Street Pier cruise terminal and mixed-use project at Pier 30-32 and Seawall Lot 330. The developer completed the environmental and entitlement approvals for this project, but ultimately determined it was not financially feasible at this site. Only the Watermark condominiums on Seawall Lot 330 were completed; funds from that residential development were set aside for a future cruise terminal project.
- **2005** Invested $4 million to update Pier 35 terminal to comply with federal homeland security requirements, increase passenger throughput, and improve amenities and public access.
- **2007** Mayor's blue-ribbon advisory panel recommended Pier 27 as site for new cruise terminal.
- **2010** Installed $5.2 million shoreside electrical power system at Pier 27.
- **2010-2014** Constructed the James R. Herman Cruise Terminal at Pier 27 in two phases (Phase I completed in Spring 2013 to accommodate the 34th America's Cup Sailing Regatta; Phase II completed in Fall 2014 to inaugurate cruise terminal service and special events venue).

Now

Completing its first full year of service in 2015, the James R. Herman Cruise Terminal has received excellent reviews from cruise lines and passengers alike. When not utilized for cruise operations, Pier 27 has successfully hosted major public and private events.



The combination of secure/protected spaces and public access spaces on the pier presents operational and security challenges for the terminal. The Port must balance the needs of the cruise operations, including compliance with federal homeland security requirements, with public access interests and related San Francisco Bay Conservation and Development Commission (BCDC) permit conditions. These challenges are often greatest on non-cruise days when the Port is required to allow public access on the pier apron where key infrastructure equipment is located (for example, shoreside power equipment, cranes, and gangways).

The Port and Metro Cruise Services, the terminal operator, continue to improve operational efficiencies at Pier 27, as well as attend to ongoing repairs and maintenance at Pier 35 which is more than 100 years old. Recent successes include:

- Improved management of Pier 27 Ground Transportation Area (GTA) for off-street handling of passenger disembarks and embarks and ship provisioning requirements;
- Driveway modifications and bollard, curb cut and signage changes to prevent backups on The Embarcadero;
- Police-enforced traffic control to ensure pedestrian and bicycle safety along The Embarcadero;
- Additional electronic reader signs to communicate traffic information to drivers on The Embarcadero; and
- Additional staffing and coordination to improve advance information and timing of arrivals of all vehicles.

The Port's partnership agreement with Metro Cruises includes incentives to increase the number of ship calls to generate more revenue. The Port's cruise facilities have high fixed costs. The annual debt service obligation for Pier 27 is $3.9 million to pay off $59.2 million over 30 years. Annual dredging costs require another approximately $3.8 million in Port funding.

Cruise ship revenues are supplemented by revenues generated from rental and event fees for civic and corporate events at Pier 27 when ships are not calling at the cruise terminal. The cruise business is year-round, with estimated 66-90 cruise calls per year. After allowing for preparation time between calls, there are about 200 days when the terminal is available for special events. The Port also relies on parking revenues from the parking lot in the Pier 27 GTA when not needed for cruise or special events, and from cruise-related valet parking at Pier 35.

The Port continues to make repairs to maintain Pier 35 cruise operations, but at increasing expense due to the age of the facility. Both berths at Pier 35 also require dredging. The Port must continue evaluating and prioritizing deep-water berth options and associated cruise industry requirements to respond to long-term cruise market opportunities and needs.

3 | EXCURSION BOATS

One of the best ways to experience "The City by the Bay" is aboard one of the many excursion boats berthed along San Francisco's vibrant waterfront. The industry offers a variety of excursion experiences, ranging from destination tours to Alcatraz island to evening cruises along the shoreline, each offering a front row seat to the dazzling lights of the City; the Golden Gate and Bay bridges; and Oakland, Richmond, and Treasure Island. For many residents and visitors, a San Francisco Bay excursion is the experience of a lifetime.

Excursion operators are valued Port tenants, who also provide significant economic, transportation and emergency preparedness benefits for the City. The largest four operators carry 4.8 million passengers per year, and are located north of the Ferry Building, proximate to the City's most scenic and famous landmarks, and easily accessible by foot and public transit. Approximately 50 charter operators carry another 50,000 passengers per year. Altogether, excursion operations contributed 4.3% of the Port's Total Revenues for FY 2014-15, or $4.2 million.

Then

San Francisco has long been the center of the Bay Area excursion boat industry, which serves millions of visitors annually. This industry is divided into four basic types of operations:

1) Dining cruises
2) Sightseeing or tourist cruises including Alcatraz and Angel Islands
3) Small charter operators
4) Casual landing facilities for excursion operators that are not home ported at Port of San Francisco such as Commodore Cruises and Presidential Yacht Potomac

When the Waterfront Plan was adopted in 1997, there were approximately 4 large excursion boat companies operating in San Francisco, commanding approximately 14 excursion vessels and 15 small charter boats. The total number of excursion boat passengers in San Francisco exceeded 4 million and the financial condition of the industry was fairly good. The existing large operators at the Port had seen modest increases in passengers over the previous five years and were still recovering from the downturn in tourism as a result of the Loma Prieta earthquake. The smaller operator's revenues had remained fairly flat. Most of the operators had additional vessel capacity, with the exception of popular recreational tours such as trips to Alcatraz and Angel Island during the summer.

Now

The primary excursion boat operations at the Port include:

- Alcatraz Tours, the National Park Service (NPS) exclusive carrier to Alcatraz Island, Pier 31 ½
- Blue and Gold Fleet, Bay Tours and Charters, Piers 39 and 41
- Hornblower Cruises and Events, Dining Cruises and Charters, Pier 3
- Red and White Fleet, Bay Tours and Charters, Pier 43 ½

Since 1997, three significant changes occurred:

1) Blue & Gold Fleet, which exclusively operated the Alcatraz Island tours, lost its contract with the NPS to *Alcatraz Tours* (owned by Hornblower), now operating at Pier 31 ½ and registering $24.4 million in revenues in 2015. Blue & Gold annual revenues fell as a result to $10.4 million in 2015.
2) Pacific Marine Charters, with revenues of $3.4 million in 1997, filed bankruptcy and closed their term operating agreement with the Port at Pier 9 which is now leased to multiple tenants including Autodesk, Blue & Gold (maintenance operations), WETA and San Francisco Bar Pilots.
3) In 2015, Port assumed South Beach Harbor operations which includes approximately 27 full-time and casual charter operators

Consistent with the Port's Waterfront Plan goal to maintain a "working waterfront", the Port Commission approved a Maritime Excursion Lease Renewal Policy in 2010, providing Port staff with internal guidelines for review and negotiation of lease renewals with ferry and excursion boat operators. The policy promotes preservation and maintenance of maritime berthing facilities, guidelines to balance against expansion of non-maritime uses that change the maritime functional character, and operational guidelines.


Image: Trip Advisor

A significant current land use issue related to excursion operations is the NPS's ongoing selection process for embarkation for ferry service between the northern waterfront and Alcatraz Island. NPS has approached the Port to consider a permanent landside home for an NPS welcome and interpretation center for its many regional destinations in the Golden Gate National Recreation Area while serving as the permanent Alcatraz embarkation site. The embarkation site has the potential to serve as an important gateway and transit point between the historic San Francisco waterfront and the natural, cultural, scenic resources of Alcatraz Island and other GGNRA park sites, providing a unique, first-class experience for tourists and local residents. NPS, through an Environmental Impact Study (EIS), is evaluating other potential sites along the northern waterfront of San Francisco, including Pier 3 at Fort Mason, and Pier 41 in Fisherman's Wharf, in addition to Pier 31 ½.

The Port has conveyed to NPS staff the importance of retaining Blue & Gold at Pier 41 and has proposed a conceptual site plan that would deliver the NPS goal of a "clear sense of identity and quality experience" at Pier 31 ½, with a seismically improved and operationally superior facility. NPS staff has

stated that all three sites remain feasible options. NPS intends to release the Final EIS in early 2016, with the goal of issuing a Record of Decision sometime in 2016.

4 | FERRIES

The Bay Area's regional ferry system is centered at the Ferry Building. The Port also has terminals at Pier 41 in Fisherman's Wharf and at China Basin Landing, alongside AT&T Park.

The Water Emergency Transportation Agency (WETA), through contract operator Blue and Gold, operates all-day service to San Francisco from terminals in Alameda (Main Street), Oakland and Vallejo, as well as weekday service to Alameda (Harbor Bay) and South San Francisco. In addition to services provided through WETA, the Blue and Gold fleet provides regular ferry service to Sausalito, Tiburon, and Angel Island. And the Golden Gate Bridge District operates ferries between Sausalito, Larkspur and the Downtown Ferry Terminal. Ferries also play an important role during regional emergencies that temporarily close bridges or regional transportation systems.

Then

Ferries have transported Bay Area residents across the Bay since 1875. Long before the Golden Gate Bridge and Bay Bridge were constructed, the Ferry Building served as the main terminus for people traveling to San Francisco from around the Bay. In the 1920's and 30's, the Ferry Building was said to be the world's second busiest terminal, behind London's Charing Cross Station. More than 170 ferries arrived and departed each day from eight berths, with approximately 50 million riders per year passing through its gates. But completion of the Golden Gate and Bay Bridges, followed by arrival of the auto-age, caused a dramatic reduction in the once-thriving ferry industry. The industry didn't revive until traffic on the bridges became unbearable and the public again looked to ferries for access to the City.

Over time, a robust passenger ferry service returned to San Francisco through the efforts of regional transit agency service providers and reinvestments in downtown and other ferry landing facilities on the waterfront. Early actions included:

- **1970** Report funded by the Golden Gate Bridge and Highway District (GGBHD) concluded that a ferry system could keep up to 2,900 cars per weekday off the Bridge.
- **1978** Completion of San Francisco Ferry Terminal facility behind the Ferry Building; annual ferry ridership tops 2 million for the first time in decades.

By the time the Waterfront Plan was adopted in 1997, ferries docked at Pier ½ just north of the Ferry Building and at the San Francisco Ferry Terminal behind the Ferry Building. Ridership still was modest compared to historic levels, but ferries resurged after the 1989 Loma Prieta earthquake as part of the region's disaster response plan.

Two critical factors were expected to determine the ultimate growth of commuter ferry ridership: 1) changes in the technology of ferryboats, and 2) the continuation of operating subsidies. If breakthroughs in ferry technology led to a reduction in commute times, and if the price of a ride was competitive with other forms of transportation, then demand was expected to continue to grow for new facilities, though at a measured pace.

In 1999, the State Legislature created the Water Transit Authority (renamed the Water Emergency Transportation Authority, or WETA, in 2008), and empowered this new regional transit agency to consolidate and operate existing ferry services, plan new routes, and coordinate ferry transportation response to emergencies or disasters. The Port later completed two new projects:

- **2001** China Basin Ferry Terminal - Port completed $2.9 million ferry landing adjacent to AT&T Ballpark, providing waterborne transit option for baseball games, special events and potential service to the south.
- **2003** Downtown Ferry Terminal Phase 1- Port completed $20 million expansion of ferry facilities in conjunction with restoration of the Ferry Building, providing four modern berths at Gates B (North Basin) and E (South Basin), a new public promenade along the east side of the Ferry Building, and the Pier 14 breakwater.

Now

Image: SFGate

Today, the ferry system on San Francisco Bay serves over 16,000 passengers per weekday and is practically bursting at the seams. Annual ridership on Golden Gate and WETA ferries has increased from 3.8 million passengers in 2012 to 4.7 million passengers in 2015. Among the factors contributing to increased ferry ridership is the limited capacity of both BART and the region's bridges to accommodate surging employment growth in the San Francisco core. New and existing commuters are discovering the ferry as a comfortable and pleasurable way to get to work. Ferries have also become an increasingly popular excursion option for visitors planning trips along the San Francisco waterfront or to one of several recent Downtown special events, including the America's Cup, Fleet Week, the Giant's World Series Parades, and Super Bowl City. Ferries have also played a critical role in providing extra commuter capacity during recent planned and unplanned bridge and BART closures.

WETA and the Port are working on the Phase II Downtown San Francisco Ferry Terminal Expansion to further expand service at the Ferry Building Terminal. The Project includes two new ferry gates, pedestrian circulation improvements including weather-protected areas for queuing and staging space for evacuees in the event of a major emergency. The project will enable new ferry service to Richmond, Treasure Island, and other locations. In October 2014, the WETA Board approved the Final EIR for the Phase II Project. Construction is scheduled to begin in 2016 and the Port expects to welcome ferry passengers in 2018.

In addition to these projects, there is interest in and exploratory planning taking place for new terminals at Seaplane Lagoon at Alameda Point, and at Mission Bay in San Francisco. Longer-term WETA projects include new terminals in the Carquinez Strait, Berkeley, Redwood City, and the South Bay.

5 | FISHING

Fisherman's Wharf is home to San Francisco's historic fishing industry. Pier 45 is a focal-point of activity, housing the largest concentration of fish processors of any Port in California. Long-line vessels that fish between the Wharf and Hawaii can deliver upward of $1 million dollars in fish to a Pier 45 processor in a single landing. A significant amount of fish trading - crab, salmon, swordfish, herring, shrimp, squid, abalone, mackerel, halibut and sole – occurs right on Jefferson Street, in the very early morning hours before most tourists awake. The Fisherman's Wharf Harbor, which includes the Hyde Street Harbor and the wharves and piers in the Inner and Outer Lagoon, is home to over 160 commercial fishing vessels, historic fishing vessels berthed at Wharf J-4, and 14 sport-fishing boats along Jefferson Street.

Then

San Francisco's historic fishing industry was firmly established in the City long before the Port's official founding in 1863. In 1900, industry operations near the foot of Union Street were moved to their current location at Fisherman's Wharf where fishermen tended their nets, repaired their boats, and sold their catch to the receivers and restaurants. Fish processing stalls were built in three buildings numbered one to nine along Taylor Street. Later, those stretching north from Jefferson Street morphed into restaurants, hence their current names of Alioto's No. 8, Fisherman's Grotto No. 9, etc. In the 1930s, many Chinese fishermen were displaced when the US Navy established the Hunter's Point Naval Station. They too moved to the Wharf. The industry flourished and Fisherman's Wharf became the world famous attraction that it remains today.

Over time, however, environmental damage caused by overfishing, development, pollution and non-native species took a heavy toll on the fishing industry and commercial fishing declined. The Port's fish processing and berthing facilities fell into severe disrepair. After decades of neglect, the City realized that without significant reinvestment in the Wharf's fishing-related infrastructure, the City would lose this important industry. The Port Commission embarked on a series of significant capital improvement projects designed to support and sustain fishing. Important milestones on this 20-year journey included:

- **1987** Port Commission rejected ambitious commercial developments at Pier 45, instead initiating the Fisherman's Wharf Seafood Center ("Seafood Center") project with the support of the fishing industry and local business community. The Seafood Center project included a modern fishing harbor at Hyde Street and a state-of-the-art seafood handling and processing center at Pier 45.

- **1989** Loma Prieta earthquake significantly damaged Pier 45, displacing the few fish-handling companies still doing business there. The Port Commission garnered funds from the Federal Emergency Management Agency and other federal, state and local sources to kick-start the Seafood Center project.

- **1995** Port completed seismic repair of Pier 45 with improvements that transformed Pier 45 Sheds B and D into a modern, environmentally superior fish processing and distribution center. Over 20 fish receiving and processing companies returned to Fisherman's Wharf.

- **2001** Port completed the $21 million Hyde Street Commercial Fishing Harbor, providing 62 berths with modern amenities (e.g. fuel, showers), including berths for larger fishing vessels seeking seasonal catches, all proximate to modern fish processors and buyers.


Image: Port of SF

- **2012** Port completed the $2 million Harbor Office and Joint Operations Facility with funding from State security grants and Port capital funds. This facility provides amenities for local and visiting commercial fishermen and boaters, including public restrooms with showers, storage areas for oil, waste oil disposal, oil cleanup equipment, and bilge pumps. It also houses the Port's Wharfinger staff and dive team, and the San Francisco Police Department Marine Unit and dive team. The facility is the Port's Alternate Department Operations Center.

- **2013** Port replaced floating camels to prevent damage when fishing vessels offload at the fish-receiving stations along Pier 45.

- **2013** Port constructed fishing gear storage lockers for local fishermen at Pier 45 Shed C.

- **2014** Port completed $ 1 million project to support continued use of Wharves J7 and J8 for Scoma's Restaurant and lockers and storage for fishermen, and $2 million project installing concrete stability wall along seawall, and repairing and replacing damaged piles and decking for continued industry use of Wharf J9 for fishing industry tenants.

- **2014** Port completed demolition and rebuild of Wharf J-4 for 20 historic fishing vessel berths in the heart of the Inner Lagoon.

Now

Fisherman's Wharf is back on the map as a major center for the commercial fishing industry and the Port remains firmly committed to "keeping the fish in Fisherman's Wharf". New challenges continue to occur. For example, the industry currently is suffering from environmental challenges such as drought and climate

change that wreak havoc on the more lucrative crab, herring, and salmon fisheries. Newer vessels of greater length and displacement are increasingly difficult to accommodate, and transportation in the congested Fisherman's Wharf surroundings and along the Embarcadero is an on-going concern.

The Port continues to work closely with its fishing industry tenants to respond to these challenges. The continued presence of a healthy fishing industry is essential to meeting a huge local demand for seafood as well as maintaining the colorful ambiance and the economic well-being of Fisherman's Wharf.

6| HARBOR SERVICES

Harbor services are the ancillary yet essential functions that actively support the prime maritime industries at the Port and throughout the San Francisco Bay. Many maritime industries rely on these vital support services and facilities to operate. Port property is utilized for maritime support functions which include: bar pilots; tug and barge operations; the Port Maintenance Division; consolidation and processing areas; warehouse facilities; ship chandlers; equipment storage and repair; environmental services; and associated staging, vehicle storage and parking. The Port's Maritime Division has been proactive in maintaining a strong base of harbor services to ensure that the Port's maritime clients can operate efficiently and effectively. Key functions and facilities are described below.

Bar Pilots

The San Francisco Bar Pilots, founded in 1850, navigate deep-draft commercial ships to and from the nine ports within San Francisco Bay, as well as the Port of Monterey. The vessels guide oil tankers, container ships, and cruise ships, many of which are much larger than the 853-foot-tall Transamerica Pyramid.

Licensed by the State of California, a bar pilot boards an incoming ship 11 miles west of the Golden Gate and provides the captain with guidance on the safe passage through the sometimes treacherous waters of the Bay. The Bar Pilots' office and boats are located at Pier 9.

Tug and Barge

Two tugboat companies are based at the Port of San Francisco: Westar Marine Services (Pier 50) and Baydelta Maritime (Pier 17). Westar, founded in 1976, provides ship assist, barge, and tanker escort; stores delivery; water taxi service; marine construction support, and offshore towing. Baydelta, founded in 1982, operates a fleet of high-tech tractor tugs offering ship assist, petroleum escort, general towing services, and offshore assignments. Baydelta is a neighbor of the Exploratorium, which made major seismic repairs to Piers 15-17 before opening in 2013, improving the pier apron and docking facilities for this maritime use.

Chandlery and Boat Repair

Chandleries provide marine equipment supplies and service and boatyards serve small to medium-sized boat repairs that are not served by Port ship repair facilities.

Image: Bay Delta Maritime

Freight Rail

Union Pacific Railroad provides freight rail service along the peninsula, but the Port's freight rail yard along Cargo Way in the Southern Waterfront is managed by San Francisco Bay Railroad (SFBR). SFBR runs the Port's "shortline" service, loading and transporting railcars from the Port's rail yard to the Union Pacific mainline tracks. SFBR maintains the railyard and tracks, secured grants to replace locomotive engines, converted engines to biodiesel, and provides training and local job opportunities for engineers and logistics managers.

Foreign Trade Zone

A Foreign Trade Zone (FTZ) site is a secured area near a designated customs port of entry that, while physically located within the United States, is considered outside US Customs territory. This allows foreign goods to be brought into an FTZ without formal customs entry for manufacturing, testing, assembly, processing, storage, and distribution. Duty payments on imported goods and materials can be eliminated, reduced, or deferred until leaving the designated area and entering US commerce.

The US Congress established the FTZ program in 1934 to stimulate economic development by providing businesses with economic advantages to conduct international trade activities in the US. In 1948, the Port of San Francisco received a Grant of Authority to establish, operate, and maintain an FTZ for the City

and County of San Francisco (FTZ No. 3). The service area now covers seven Bay Area counties, with four active sites and a fifth site pending federal approval.

Port Maintenance

The Port's Maintenance Division, based at Pier 50, keeps 7½ miles of piers and waterfront facilities in service, a challenging assignment given that many structures date back more than a century. The maintenance team includes asphalters, carpenters, divers, electricians, engineers, gardeners, iron workers, laborers, machinists, mechanics, painters, pile drivers, plumbers, roofers, sheet metal workers, and welders.

Working in conjunction with Port Engineering, the Maintenance Division completed many major projects over the past decade, including: repairs to a 270-foot section of Pier 48 south apron (in 2005, $400,000); rehabilitation of Pier 9 north and south aprons (in 2008, $800,000); and repairs to Pier 50 valley substructure (in 2013, $1.4 million).

7 | RECREATIONAL BOATING

San Francisco Bay is an exhilarating place for recreational boating and water activities, including fishing, racing, kayaking, swimming, windsurfing, rowing, sailing and a variety of other human-powered boating activities. Recreational boating facilities on Port property include three marinas (Pier 39, South Beach Harbor, and Mission Creek) and a system of small boat/kayak launch/landings facilities at Aquatic Beach, Pier 39, Pier 1 ½ , Mission Creek, , South Beach Harbor, Pier 52, and Islais Creek. The Port continues to add amenities for recreational boaters including new launch and landing sites, storage facilities and parking amenities.

Then


Image: SFFunCheap

During the early 1980's, two marinas were built on Port property, at Pier 39 and South Beach Harbor. When the Plan was adopted in 1997, high capital costs and uncertain revenue streams made marina development and operation risky without complementary, revenue-generating uses. Information gleaned from the South Beach Harbor marina (then operated by the City's Redevelopment Agency) indicated that berthing rentals alone likely would be insufficient to support the costs of new marinas. But it was expected that marinas could be a complementary use to mixed-use developments; each use would benefit the other. Revenue from adjacent commercial development could help fund marina infrastructure and operations and, in turn, marinas could help attract visitors and customers to adjacent commercial development.

In 1997, the Port only had one public launch facility for trailered boats and non-motorized small craft, and it was in poor condition. On busy days, there were as many as thirty boats on trailers waiting to gain access to this one facility. In addition, there was insufficient off-street parking for boat trailers near the launch, and insufficient dry storage for small boats. Additional facilities were needed to meet the boat repair and haul-out needs for recreational boaters.

Between 2006 and 2008 the Port invested over $4 million and constructed a new public boat launch at Pier 52. This facility includes two launch ramps and a parking lot to accommodate up to 30 vehicles and trailers. This facility was further upgraded in 2014 to better support human-powered boaters.

In 2007, a free, publicly accessible boat dock was built to provide direct waterside access for visiting recreational boats as part of the historic rehabilitation of Piers 1½-3-5. This dock is highly utilized by visiting human-powered and motorized vessels; it also serves as one of four water-taxi stops along the Port.

In 2007, the former San Francisco Redevelopment Agency completed a $6.3 million capital improvement project to revitalize the South Beach Harbor berths, docks and Pier 40 shed. These improvements included new public access, support facilities for kayak and human-powered recreational craft, a Bike Hut and a major new facility to serve the boating community. The improved marina features publicly accessible walkways and open space, including a children's playground and the Bay Area Association of Disabled Sailors. Additionally, Pier 40 is one of three Port water taxi facilities.

After the State's elimination of Redevelopment agencies in 2012, operational and capital responsibilities for South Beach Harbor were transferred to the Port in 2015. The financial shortfall for facility repairs and operational requirements dictated development of a close working partnership between the Port and South Beach Harbor slip tenants and Pier 40 tenants. An all-hands approach led to negotiated, graduated increase in rents to generate funds for Harbor improvements, and established a stabilized base of operation.

Now

Perhaps one of the most significant improvements for the recreational boating community will result from the Port's ongoing collaboration with partner agencies and stakeholders to bring the San Francisco Bay Area Water Trail (Water Trail) to fruition along the Port.

In 2005, the California State Legislature established the Water Trail, a growing network of access sites (or "trailheads") that will help people using non-motorized, small boats such as kayaks, canoes, dragon boats, stand-up paddle and wind-surf boards (human-powered boating) to safely enjoy single and multiple-day trips around San Francisco Bay. Since 2001, the Port has actively participated in planning the Water Trail through its work with Bay Access, the organization that initiated the idea and championed the state legislation (AB 1296) establishing it.

The Port and its partners and stakeholders, including Port tenants, Kayaks Unlimited and City Kayak, are collaborating with Bay Area Water Trail staff to support existing and new Water Trail facilities along the Port waterfront. Seven existing sites have been identified for possible Water Trail designation: 1) Islais Creek Landing; 2) Pier 52 Boat Launch; 3) Mission Creek; 4) South Beach Harbor; 5) Pier 1 1/2; 6) Pier 39; and 7) Aquatic Park. Port staff is considering improvements to access, safety and ease of use for these existing facilities including: kayak storage, improved dock floats, and installation of emergency ladders.

After analyzing safety and proximity to commercial maritime operations and other Port tenancies, ferry routes, wave and tidal conditions, sensitive habitat and other boating safety standards and amenities, the

Port is in the process of applying for Water Trail designation for three of the seven sites: 1) Islais Landing; 2) Pier 52 Public Boat Launch; and 3) the South Beach Harbor, and is working towards designation for the remaining sites as they are improved. Port Staff is working with SFMTA on extending parking durations and designation of loading zones to accommodate human-powered boats.

An additional "planned" site has been identified at the 9-acre Crane Cove Park planned for Pier 70. The first phase of the $24.5 million park will include a new sandy boat launch for human-powered craft, a human-powered boating aquatic center, and restrooms. Phase 1 is scheduled for completion in late 2017.

In addition to these ongoing projects, the Waterfront Plan review recommended that Port Staff evaluate additional locations for water recreation and lay-berthing to balance the need to provide public access with maritime berthing and operations, in consultation with BCDC and the MCAC.

8 | SHIP REPAIR


Image: Peter Chinn/SFGate

Ship Repair services at the Port of San Francisco include alterations or repairs for cruise ships; tankers; foreign and domestic bulk carriers and container ships; military vessels; tugs, barges, industrial support vessels; and local bay traffic vessels. These services are critical to the Port's mission to sustain maritime commerce and meet other public trust responsibilities.

Ship repair takes place at the Port's Pier 70 Shipyard (Piers 68 and 70 and SWL 349) in the Southern Waterfront, which is operated by BAE Systems San Francisco Ship Repair (BAE SFSR). The Shipyard is comprised of 17.4 acres of submerged land, 14.7 acres of dry land improved with 19 buildings, and Port-owned equipment including 2 drydocks and a new, state-of-the-art shoreside power system.

Then

Ships have been built and repaired at the Port for over 150 years. In the 1960's, the ship repair industry employed some 20,000 workers at over 15 different companies in San Francisco. However, since the Bay Area military base closures of the early 1990s, San Francisco's ship repair industry has steadily declined, dropping by nearly 80 percent when U.S. Naval facilities at Alameda and Mare Island in Vallejo closed. Today Pier 70 is the Port's only operating shipyard. Key reasons for these industry changes include:

- Reduction in active military ships, coupled with reduced government ship repair subsidies and contract opportunities.
- Foreign competition from other countries that continue to subsidize their ship repair industries, putting U.S. operations at a considerable disadvantage in the commercial market.

Now

Despite these market changes, San Francisco has remained the ship repair industry leader in Northern California, in part because its central-coast location is attractive for both northbound and southbound cruise and tanker fleets. Also, the Shipyard's floating Drydock #2 was, until recently, the largest commercial floating drydock dedicated to ship repair in the Americas. Drydock #2 can handle repairs for the largest passenger cruise vessels in operation.

Over the last10 years, BAE has successfully repositioned its business plan and engaged new partnerships to compete in both the commercial and defense ship repair markets. Tanker, cruise, tug & barge, and emergency cargo ship repairs now account for 50% of total yard revenues, with the balance coming from military and defense markets. Gross Shipyard revenues have increased 65% over the base year of 2005 when BAE acquired the business and the Port lease. Recent successes at the Shipyard include:

- **2008** Port partnered with BAE and Princess Cruises to invest $5 million to upgrade the lifting capacity of Drydock #2 to 54,000 tons, enabling it to service the largest cruise ships operating in the Pacific Ocean.
- **2010** Port partnered with BAE to dredge the Central Basin.
- **2005** BAE built new sandblasting facility that significantly reduced air particulate emissions.
- **2012** Port partnered with BAE and San Francisco PUC to provide $5.7 million for construction of a high voltage shoreside power system that eliminated the need for ship-board diesel generators to power the ships while in drydock.

While enjoying these successes, the Port and BAE have identified new competitive challenges. Portland has acquired a new drydock (the "Vigorous") that is larger than Drydock #2 and has a lifting capacity of 89,000 tons. The Port and BAE are assessing the feasibility of continued repair and maintenance of Drydock #2, which is 45 years old, versus the feasibility of acquiring a newer drydock with lifting capacity that is more competitive with Vigorous. Any replacement should be able to service the largest deep water vessels operating on the Pacific Ocean.

9 | TEMPORARY & CEREMONIAL BERTHING

Port "wharfingers" manage the needs of a wide variety of visiting ships and vessels that require berths for temporary stays in San Francisco. Working maritime vessels, government and research ships, picturesque historic tall ships, together with ongoing ferries, excursion boat and harbor service vessel operations keep the waterfront lively and colorful.

Historic Ships

The Port also provides long-term berthing for a number of historic ships. Most are concentrated within Fisherman's Wharf at the San Francisco Maritime National Historic Park on the Hyde Street Pier. On the east side of Pier 45, the USS Pampanito and USS Jeremiah O'Brien attract thousands of visitors each year. The Ferryboat Santa Rosa is berthed at Pier 3, the headquarters for Hornblower Excursions in the Ferry Building area.

The market for historic vessels is enhanced by and dependent on San Francisco's strong visitor and tourism market. Public waterfront open space and public realm improvements in Fisherman's Wharf, including Jefferson Street between Jones and Hyde Street, have improved access to historic Hyde Street Pier and

historic vessels at Pier 45. However, revenues from historic ship exhibits generally do not cover capital costs for berths.

Image: CBS

Temporary and Ceremonial Berthing

The Port provides temporary & ceremonial berthing for deep water ships, commercial fishing boats, yachts and pleasure boats, as well as government and military vessels from the U.S. Coast Guard and Navy, research vessels from the National Oceanic and Atmospheric Association, and foreign navies. The Port also receives good will calls from picturesque historic tall ships representing countries from around the world. These ships berth for time periods ranging from a few hours to a few weeks, such as during the annual Fleet Week, depending on whether they are calling at the Port to load and unload materials, make minor repairs, provide shore visits for crew members or ship visits for the public, or lay over between assignments.

In order to accommodate the full range of temporary and ceremonial vessel needs, some berthing facilities require truck access and turnaround areas, utilities, pier fender systems, parking and security. Because of the irregular demand for these facilities, and the limited revenues to support improvements and maintenance, the Port generally accommodates these needs as part of its terminal operations at the Pier 35 and 27 cruise terminals, Piers 30-32 (South Beach), 50 (Mission Bay), and Piers 80 and 94-96 (Southern Waterfront). The Exploratorium at Pier 15-17 Project also included an improved temporary berth at the pier's end.

10 | WATER TAXIS

Water taxis are a popular form of transportation in many of the world's major cities, and San Francisco has many viable locations for water taxi stops along its shore. Currently, there are four water taxi landing sites on Port property, spread out along the waterfront to serve the following subareas and attractions:

- **Pier 40, South Beach/China Basin** Attractions: AT&T Park, South Beach Harbor
- **Pier 1½, Ferry Building Area** Attractions: Ferry Building, Financial District
- **Pier 15, Northeast Waterfront** Attractions: The Exploratorium, James R. Herman Cruise Terminal at Pier 27, Alcatraz Landing, Levi's Plaza
- **Hyde Street Harbor, Fisherman's Wharf** Attractions: Aquatic Park, Jefferson Street, PIER 39, Aquarium of the Bay

Two operators provide service to and from these sites: San Francisco Water Taxi provides regularly scheduled "hop-on/hop-off" service along the waterfront, and Tideline Marine provides on-call service, primarily from San Francisco to the North Bay. In 2015, both operators were active for 372 days, carrying more than 6,100 passengers.

Then

When the Waterfront Plan was adopted in 1997, there was limited interest and experience with water taxis, and so this "land use" was treated as an extension of ferries and excursion boats, rather than a distinct industry. Since then, larger crowds enjoying the waterfront combined with ever-increasing congestion on The Embarcadero have led the water taxi industry, Port Commission, and Port staff to take steps to grow this maritime use.

In 2012, the Port conducted a Request for Proposals (RFP) process and selected the two operators now serving the Port. Port staff and the operators then worked with a transportation consultant, the Waterfront Transportation Assessment staff of the San Francisco Municipal Transportation Agency and other stakeholders to develop a long-term vision for water taxi service in San Francisco. This work described water taxi market opportunities and challenges, and identified opportunity sites for new water taxi docking locations along the waterfront, including piers outside of Port jurisdiction.

These opportunity sites range from near-term to long-term potential. They will be evaluated based on a variety of factors including proximity to waterfront attractions, number of residents and jobs within a ¼ mile radius, level of physical/structural readiness, and relative distance from other landing sites. Implementation of these additional landing sites will be critical to the ultimate success of the water taxi market in San Francisco.

Near-Term (1-3 years)

- **Pier 52 (Mission Bay)** The Pier 52 Boat Launch already has the capability to berth small motorized watercraft.
- **Pier 70 (Crane Cove Park/Dogpatch)** The concept plan for Phase II of Crane Cove Park already includes a small craft launch.

Mid-Term (3-5 years)

- **South Street or 16th Street** Near the proposed Warriors Arena Complex, a water taxi berth and new ferry landing could serve new activities in the area.
- **Fort Mason** Although beyond Port jurisdiction, this appears to be a viable water taxi site given the number of events and visitors hosted there.

Long-Term (5-10 years)

- **Seawall Lot 337, Pier 70, Hunters Point Shipyard, Candlestick Point, and Treasure Island** Projects will provide significant expansion opportunities.
- **San Francisco Yacht Club and Marina** A landing at or near the site could provide access to the Presidio, Golden Gate Bridge, and Crissy Field.

Now

Port staff is committed to fostering the growth of water taxis as a viable transit mode. The increasing popularity of the waterfront, fueled in part by the expanding growth of the central and southern

waterfront, presents a tremendous opportunity to expand service in the coming years, particularly southward beyond China Basin along the Blue Greenway. Port staff will continue to coordinate with the Waterfront Transportation Assessment staff to integrate water taxis into the overall waterfront transportation framework.

Consideration also will be given in the Waterfront Plan Update process to new sites for water taxi operations, specifically at Pier 52 (boat launch) and Pier 70 (Crane Cove Park), as well as to policies that address operational challenges facing this industry. For example, one challenge has been the ability to protect and enforce the landing rights of the licensed operators during events such as Fleet Week when recreational boaters have occupied dock space designated for water taxis.

Image: Tideline Water Taxi

APPENDIX | GLOSSARY

Apron The area on the waterside of a wharf or pier, usually where cargo is prepared for loading.

Break-bulk Freight which generally is made up of similar size pieces which is loaded into or unloaded from a ship's hold in small bulk quantities, usually loosely, on a pallet or in a cargo net. Break-bulk was the traditional method of cargo handling along the Port's finger piers before innovations in container cargo shipping.

Cargo Shipping Primary, support and ancillary facilities for waterborne transport of cargo shipped in container boxes or in bulk (dry bulk, liquid bulk, break-bulk, neo-bulk) including but not limited to: shipping terminals and berths, cargo handling, storage and warehousing, equipment storage and repair facilities, cargo sourcing, container freight stations, freight rail and truck access, ship servicing, administrative functions, and employee support services, (e.g. training facilities, parking).

Container Cargo Cargo which is transported in standard sized boxes.

Dry Bulk Dry loose freight, such as grain and various ores, which is loaded or unloaded via conveyor belts, spouts or scoops.

Drydock A drydock is a special marine vessel used to lift other marine vessels as large as a cruise ship out of the water to service or make repairs to their hulls (underbellies).

Ferry & Excursion Boats and Water Taxis Primary, support and ancillary facilities for waterborne transportation (e.g. commuter ferries, waterborne taxis hovercrafts) or short-term excursions (e.g. charter boats, mini-cruises, sightseeing, gaming, dining and entertainment on the water) including but not limited to: passenger terminals and berthing areas, storage, employee or passenger parking, administrative functions, ship servicing areas, layover berths, fueling stations and other boat or passenger services.

Fishing Industry Primary, support and ancillary facilities for commercial or sport fishing operations including but not limited to: fishing boat berths and harbors, fish processing, handling (e.g. cleaning and packing) and distribution facilities, support services (e.g. fuel docks, Fisherman's Wharf Chapel, fishing research and education facilities), storage, maintenance and administrative functions, and employee services (e.g. training facilities and parking).

General Industry Facilities for enclosed and open air industrial activities, including but not limited to: recycling operations, automobile repair and related services, bio-remediation, sand and gravel operations, transmission facilities, and manufacturing operations.

Historic Ships Primary, support and ancillary facilities for display of historic vessels including but not limited to: berthing areas, museum/exhibit and administrative space, storage maintenance and workshop space and employee and visitor parking.

Liquid Bulk Liquid freight, such as petroleum or vegetable oil, which is shipped in tankers rather than in drums or other small, individual units.

Maritime A general term used to describe industrial, commercial or recreation activities related to waterborne commerce, navigation and recreation, including but not limited to: cargo shipping, ship repair, ferries and excursion boats, cruises, recreational boating, historic ships, fishing industry, berthing.

Maritime Office Administrative and business functions for any maritime industry including, but not limited to: import/export businesses, legal and professional services.

Maritime Support Service Ancillary functions needed to support maritime activities including but not limited to: tug and tow operations, bar pilots, ship chandlers, associated parking and maintenance, equipment storage, repair and warehouse facilities, environmental services, Foreign Trade Zone and Port maintenance.

Neo-bulk Freight such as autos, steel products and newsprint paper rolls which is shipped in large bulk quantities.

Post-Panamax A term currently used to distinguish the newer, larger cruise ship or vessel that is too large to pass through the Panama Canal in Panama. Currently, a post-Panamax ship sailing between the Atlantic and Pacific oceans (or Miami and Los Angeles) will have to navigate about 8,000 miles around Cape Horn at the tip of South America – more than a month sailing. A Panamax ship, which is smaller and narrower, can pass through the Panama Canal from Miami to Los Angeles, or vice versa, in 15 days. A Post-Panamax vessel can transport up to 2 ½ times the cargo of a Panamax vessel.

Port-Priority Use and Port-Priority Use Areas The BCDC/MTC Seaport Plan designates areas that should be reserved for port priority uses, including marine terminals and directly-related ancillary activities such as container freight stations, transit sheds and other temporary storage, ship repair, and support transportation uses including trucking and railroad yards, freight forwarders, government offices related to the port activity, chandlers and marine services. Uses that are permitted within port-priority use areas may also include public access and public and commercial recreational development, provided they do not significantly impair the efficient utilization of the port area.

Recreational Boating and Water Use Primary, support and ancillary facilities for recreational boating and other water sport enthusiasts (e.g. swimmers, kayakers and windsurfers) including but not limited to: sailing center for yachting events, swimming, rowing and boating clubs, marinas, visiting boat docks and moorings, boat rental facilities, boat launches, fueling stations, repair and dry storage facilities, administrative functions, visitor, boat trailer and employee parking, public restrooms, and other public facilities.

Ship Repair Primary, support and ancillary facilities for repair, restoration, and maintenance of large and small vessels, including but not limited to: drydock and berthing areas, warehouses, workshop and storage areas, administrative functions, and employee support services, (e.g. training facilities, parking).

Temporary & Ceremonial Berthing Primary, support and ancillary facilities for berthing of historic, military or other visiting vessels on temporary basis including but not limited to: berthing and passenger greeting, bon voyage and waiting areas, bus, taxi and visitor pick-up/drop-off and parking areas.

Transportation Services Facilities for land-based, water-borne or intermodal (e.g. connections between water and land transportation services) transportation operations, including but not limited to: transit and traffic facilities, areas for ticket sales, passenger information and waiting, bus, automobile, taxi, pedicab and horse drawn carriages staging areas and pick-up and drop-off zones, and related administrative functions.

Warehousing/Storage Includes but is not limited to: facilities for storage generally in enclosed buildings, and related transport and distribution of general (non-maritime cargo) goods. Mini-storage warehouses are prohibited on piers or within 100 feet of the shoreline.

Water-dependent Activities Activities, businesses or industries which depend on a waterfront location to function, such as cargo-related activities, berthing of historic, ceremonial or other ships, ferry and excursion boat operations, fishing industry uses, maritime support uses, recreational boating and water use, ship repair, and water taxi docking.

Water-Oriented Uses Under the McAteer-Petris Act, BCDC can permit Bay fill only for certain "water-oriented" uses specified in the law or "minor fill for improving shoreline appearance or public access to the Bay." The water-oriented uses the law permits include water-related industry, bridges, wildlife refuges, and water-oriented commercial recreation and public assembly. Housing and offices are not considered water-oriented uses.