

## Executive Summary 2023-2024

The Harbor Safety Committee (HSC) continued its collaborative process to engage the maritime community in supporting navigation safety in the San Francisco Bay.

During 2023-2024:

- The HSC has continued to hold hybrid meetings, with options available online, as well as rotating physical locations around the bay. Meetings are always open to the public.
- In 2023, Scott Humphrey became the Executive Director of the Marine Exchange and was appointed as Chair of the HSC. Captain Tony Heeter, Blue and Gold Fleet, was appointed as HSC Vice-Chair. Membership positions and work groups also saw various personnel changes, such as the new addition of Erin Pierson, Crowley, as Chair of the Tug Work Group. A new work group was established with the introduction of the Marine Mammals Work Group, chaired by Kathi George of the Marine Mammal Center out of Sausalito.
- The creation of a new cybersecurity HSC membership position is being considered in addition to a new cybersecurity subcommittee potentially led by Cal OES. Cybersecurity training and incident response are Cal OES priorities. A formal proposal to OSPR is being developed and will be submitted upon HSC approval.
- In response to the Baltimore bridge collapse incident, it was proposed that the HSC, working with the Marine Exchange, conduct a Simplified IALA Risk Assessment (SIRA) of the SF Bay region. The eight-week SIRA process analyzes navigation risks including bridges and underwater obstructions. A formal proposal is being developed for HSC consideration.
- The Tug Work Group, with input from the Navigation Work Group, is reviewing ship assist best practices.
- The Navigation Work Group partnered with the Marine Mammal Work Group on Vessel Speed Reduction (VSR) issues. In May 2024 the HSC voted to support a letter drafted by the Bar Pilots requesting repair of the Oakland Outer Harbor ranges. In May 2024 the HSC voted to support a letter drafted by the Bar Pilots requesting the SF Sea Buoy racon be retained. In May 2024 the HSC voted to support a letter drafted by the Bar Pilots requesting NOAA installation of harmonic tide stations in Stockton and Sacramento.
- The Ferry Operations Work Group is updating HSC ferry routing protocol and proposing an additional downbound traffic lane. The updates will be voted on by the HSC after stakeholder input. The Ferry Operations Work Group, with assistance from the Navigation Work Group, drafted updates to HSC Dead Ship Tow Guidelines which allow the use of Class D tugs for small passenger vessel towing. The HSC voted to approve the update to the Harbor Safety Plan in May 2024.
- The Ferry Operations Work Group reported on the Bay Ferry VI maritime security exercise which was held successfully in September 2023. The exercise brought law enforcement and ferry crews together for active threat training. The ferry industry is planning for fleet electrification in the coming years. The hydrogen fuel cell powered Sea Change ferry is undergoing certification before operation in the bay.
- The Dredge Issues Work Group held meetings focused on regional dredging priorities. Pinole Shoal Channel shoaling continues to be a concern. The channel is not scheduled to be dredged

in 2024 due to USACE deferred dredging. Ship pilots require sufficient under keel clearance in Pinole Shoal Channel and may delay transits during low tide if channel depth is reduced.

- The PORTS Work Group held a meeting to consider potential upriver expansion of SF PORTS to Stockton and Sacramento. The delta region is severely lacking in tide and current meters to aid navigation. The SF Bar Pilots support adding several new tide gauges and current meters along the Stockton and Sacramento Channels. Tide and current data allow for more accurate planning and greater navigational safety in addition to increased cargo transport and more efficient shipping to upriver ports. Funding for the proposed new PORTS stations is an issue.
- The Prevention Through People Work Group reported that the lack of recreational fuel docks in the region is a concern. Restricted fuel dock access is a safety issue for smaller vessels including fireboats and is a challenge for regional emergency planning.
- The Marine Mammals Work Group held regular meetings to consider VSR issues and proposals for marine mammal protection. The VSR program in the SF Bay region runs from May 1<sup>st</sup> to December 31<sup>st</sup>. Ships are asked to reduce speed offshore for whale safety. Kathi George presented at the 2024 National Harbor Safety Committee Conference. A new section of the Harbor Safety Plan titled NOAA Marine Mammal Guidelines was drafted and approved by a May 2024 vote of the HSC.
- Significant maritime events reported on by the USCG included San Francisco Fleet Week which was held in October 2023; the Asia-Pacific Economic Cooperation (APEC) Summit which was held in San Francisco in November 2023; and the San Francisco New Year's Eve fireworks display.

The Committee also received a number of presentations related to diverse topics including:

- Sam Seder gave a presentation to the committee on Navier electric hydrofoil boats. Navier produces fully electric hydrofoil boats for recreational and commercial small passenger vessel/water taxi use. The prototype vessels were first built in the state of Maine and are now being manufactured in Alameda. The N30 vessel is 30 feet long and uses hydrofoil technology to ride over the water providing a smooth and quiet transit. Hydrofoil technology provides significant drag reduction leading to greater efficiency. Hydrofoil technology can also be applied to different types of vessels including tugboats.
- Sam Levens gave a presentation to the committee on the International Transport Workers Federation (ITF). ITF is a global federation of 696 trade unions and is responsible for maritime labor inspections worldwide. Vessel inspections are conducted to ensure safe and humane conditions for mariners. Vessels flying Flags of Convenience are of particular concern. Labor issues including time onboard, shore leave, wages, age, food access, injuries, harassment, and living conditions are assessed and reported. Covid-19 was particularly difficult for many mariners due to repatriation issues, lack of shore leave, high cost of food, overtime wage theft, and associated mental health problems. ITF has limited staff and relies on tips from the public to determine which vessels to inspect.
- Mallika Mukundan, Chevron New Energies, gave a presentation to the committee on hydrogen fuel. Chevron is committed to bringing new sources of cleaner energy to the market including renewable natural gas/diesel, hydrogen, and advanced geothermal. Carbon capture and storage technology is also a priority. A mix of solutions will be needed to meet clean energy goals with hydrogen predicted to be about six percent of the total by 2050. Hydrogen production will need to increase significantly to meet demand. The trucking and maritime industries are particularly suited to adopting hydrogen energy. Port areas are susceptible to air pollution and are good candidates for adoption of hydrogen fuel. Industry partnerships are encouraged.

- Stas Margaronis, The Propeller Club, gave a presentation to the committee on a proposed flooding, sea-level rise, and climate change resilience information clearinghouse to be run by the Marine Exchange. The Propeller Club in partnership with the Society of American Military Engineers (SAME) hosted the annual Storms, Flooding and Sea Level Defense Conference in November 2023 which highlighted the scope and impact of climate change. It was reported that sea level rise and flooding defense could cost over 100 billion dollars regionally. Major concerns include liquefaction in San Francisco, Oakland Airport flooding, and Redwood City Harbor dredging. Beneficial reuse of dredge material and wetland restoration are possible mitigations, but funding is an issue. It was reported by the NWS that melting of Antarctic ice could cause substantial sea level rise in coming decades. Potential earthquake subsidence increases flooding risk. Preparation and long-term planning are of primary importance. Monitoring systems such as SF PORTS are essential. It is proposed that the Marine Exchange collect and distribute flooding and sea level defense information to facilitate regional cooperation and increase extreme climate resiliency. A grant is being sought to fund the project.
- Jim Behrens, UC San Diego, gave a presentation to the committee on the Coastal Data Information Program (CDIP). The program began in 1975 and now operates twenty-five Waverider buoys offshore California collecting wave data. Funding for the program is provided by USACE, the State of California, and the US Navy. A CDIP buoy is located in the San Francisco Bar Channel. Wave data from the buoy is transmitted every thirty minutes and disseminated through NOAA SF PORTS. CDIP buoys measure wave energy, direction, and height. Ocean current and temperature data are also collected. Several record high waves were recorded in 2023. The data is used for wave model forecasting, coastal erosion research, and real time marine safety alerts to inform ship navigation. Maintaining funding for CDIP is critical.
- Pia Franzese and Romario James, Port of Oakland, gave a presentation to the committee on the new Oakland Portal website. The Oakland Portal includes trucking data from the grant funded Freight Intelligent Transport System (FITS) in use at the port. Fiberoptic cables, smart cameras, changeable message signs, and RFID equipment were installed. An Emergency Operations Center was also built. Using all of the new data available, including shipping data from a partnership with the Marine Exchange, the Oakland Portal is able to calculate truck wait times upon their arrival to the port. This resource is intended to increase trucking efficiency. Trucking turn time data can be beneficial to maritime port stakeholders for vessel schedule planning and to increase shipping efficiency. The reduction of truck idle time can also reduce emissions.
- Ernest Batty, IMIS Global Limited, gave a presentation to the committee on International Maritime Organization (IMO) data standards. S-100 IMO standards apply to hydrographic and maritime environment overlays. The standards are international and ensure consistency between maritime organizations worldwide. S-200 and S-400 standards apply to Aids to Navigation (ATONs), VTS and Marine Exchange organizations, and vessel port calls. For port calls, critical timestamps are collected at certain points along a vessel's transit including arrival, first line, last line, and departure, among others. IMIS developed the Marine Exchange's MIMS vessel tracking and information system to adhere to these standards which facilitate data sharing. Automation of data collection can be incorporated.

See Appendix C, Annual Work Group reports, for activities conducted over the previous year.