

Harbor Safety Committee

of the San Francisco Bay Region

*Mandated by the California Oil Spill
Prevention and Response Act of 1990*

Harbor Safety Committee of the San Francisco Bay Region

Thursday, January 10, 2019

California Maritime Academy, Richmond Maritime Safety & Security Center
756 West Gertrude Street, Richmond, CA

Capt. Lynn Korwatch (M), Marine Exchange of the San Francisco Bay Region (Marine Exchange), Chair of the Harbor Safety Committee (HSC); called the meeting to order at 10:05.

Marcus Freeling (A), Marine Exchange, confirmed the presence of a quorum of the HSC.

Committee members (M) and alternates (A) in attendance with a vote: **Jim Anderson** (M), CA Dungeness Crab Task Force; **John Berge** (M), Pacific Merchant Shipping Association; **Ted Blanckenburg** (A), AmNav Maritime Services; **Capt. Bob Carr** (M), San Francisco Bar Pilots; **Capt. Tony Ceraolo** (M), United States Coast Guard; **Aaron Golbus** (M), Port of San Francisco; **Troy Hosmer** (M), Port of Oakland; **Ben Huber** (M), Westar Marine Services; **Capt. Thomas Kirsch** (M), Blue and Gold Fleet; **Lt.Col. Kevin McCormick** (A), US Army Corps of Engineers; **Jim McGrath** (M), Bay Conservation and Development Commission; **Jeff Robbins** (M), General Steamship Corporation; **Julian Rose** (M), Marathon Petroleum.

The meetings are always open to the public.

Approval of the Minutes-

A motion to accept the minutes of the November 8, 2018 meeting was made and seconded. The minutes were approved without dissent.

Comments by Chair- Capt. Lynn Korwatch

Welcomed the committee members and audience.

Coast Guard Report- Capt. Tony Ceraolo

- Introduced Bob Blomerth, new director of Sector San Francisco VTS. Bob Blomerth addressed the committee and welcomed engagement with the maritime community.
- Advised of a November allision involving ferry vessel San Francisco. The vessel hit the seawall at the SF Ferry Terminal resulting in hull damage and two minor injuries.
- Advised of high winds and zero visibility in November which impacted vessel traffic. CMAs were activated and vessels directed to anchorage. Recent high winds exceeding 25-30 knots

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have caused incidents in Oakland and Benicia where vessels swung off the dock and required assistance from nearby tugs. Several scheduled events were postponed due to high winds.

- Advised that the National Maritime Center (NMC) is closed during the government shutdown. The National Pollution Fund Center (NPFC) has announced that Certificate of Financial Status applications will not be processed during the shutdown. The USCG will continue to verify vessel COFR status.
- Advised that Sector SF Small Passenger Vessel Newsletter #4 was published in December.
- Announced that he will be leaving Sector San Francisco in spring or summer, 2019. Capt. Marie Byrd, current Deputy Sector Commander, will be assuming command.
- LCDR Rebecca Deakin read from the November and December- 2018 Prevention/Response Reports (attached).
- Jim McGrath asked if the partially submerged barge by the San Francisco Yacht Club has been removed. The USCG confirmed removal.
- John Berge asked about the status of COFR renewals if the government shutdown continues. Capt. Ceraolo advised that the issue is a concern.

Army Corps of Engineers Report- Lt.Col. Kevin McCormick

- Read from the US Army Corps of Engineers, San Francisco District Report (attached). FY 2018 dredging is finishing up and FY 2019 is underway. The Richmond Inner Harbor dredging contract is being awarded. Pinole Shoal dredging is scheduled for June. Debris removal was near average in November and December. A Pinole Shoal condition survey was recently conducted and will be posted soon.

Clearinghouse Report- Marcus Freeling (November and December reports attached)

OSPR Report- Mike Zamora

- Advised that OSPR's inland regulations received final approval and became law on January 1st.
- Announced that Capt. Sean Daggett, Sause Brothers, has been appointed as primary HSC member representing tug operators. Term ends on January 9, 2022.
- Tom Cullen, OSPR Administrator, thanked those who participated in developing OSPR's inland regulations. Issues including derelict vessels and non-floating oils are being addressed.

NOAA Report- No Report

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State Lands Commission Report- (November and December reports attached)

Report on the Water-Go-Round Project- Joseph Pratt, Ph.D., Golden Gate Zero Emission Marine

- Joseph Pratt, Golden Gate Zero Emission Marine, gave a presentation to the committee on the Water-Go-Round hydrogen fuel cell ferry project (presentation slides attached). Hydrogen fuel cell technology is zero emission with potentially lower total cost than conventional systems. New regulations are requiring reduced emission vessels. In fuel cells, hydrogen and air react to produce electricity and water. Hydrogen is used similarly to natural gas but contains no carbon and can be used in any type of vessel. The Water-Go-Round is a 70 foot catamaran ferry that holds 84 passengers. Hydrogen fuel cells and Li-ion batteries provide power with the hydrogen fuel tanks located on top of the vessel. The project began in June, 2018 with service set to begin in October, 2019. A three-month trial will be held using the ferry in a variety of different ways to collect data. The project is partially funded through a grant from CARB. The ferry will be put into commercial service after the trial.
- Capt. Kirsch asked about the weight of the fuel cell system. Joseph Pratt advised that weight is comparable to conventional systems but volume is an issue. Hydrogen requires up to ten times more volume than diesel. Ted Blanckenburg asked about hydrogen production. Joseph Pratt advised that hydrogen is currently produced mostly from natural gas refining but the goal is to make hydrogen renewably in the future. John Berge asked how many hours of operation the ferry will have per fueling. Joseph Pratt advised the ferry will be able to operate for one day as a high speed ferry or 2-3 days touring. Jim McGrath advised that ferry travel typically has poor carbon and NOx emission statistics per passenger and this technology has the potential to be a game changer. Joseph Pratt advised that the ferry will fuel at the AmNav dock in Oakland. DOT and USCG regulations apply. Currently, taking fuel cost and efficiency into consideration, the hydrogen fuel cell system is 2-3 times more expensive to fuel compared to diesel. The cost difference is expected to shrink over time.

Work Group Reports-

Tug Work Group- Ted Blanckenburg advised that there was nothing to report.

Navigation Work Group- Capt. Bob Carr introduced Joy Hall, Conoco Phillips. Capt. Korwatch advised that it has been a long time since reduced visibility regulations were reviewed. The Navigation Work Group is tasked with looking at existing HSC visibility guidelines and updating them if required to promote security and safety. Capt. Carr advised that speed limit guidelines should also be reviewed and possibly changed to speed over ground instead of speed over water.

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Ferry Operations Work Group- Capt. Thomas Kirsch advised that ferry service is expanding with larger boats being added to the fleet. Richmond ferry service began today. NVIC 05-01 will be reviewed. Capt. Korwatch advised of increased radio traffic and tasked the Ferry Operations Work Group with looking into the possibility of ferry vessels transmitting route information electronically through AIS or other means.

Dredge Issues Work Group- Julian Rose advised that a letter has been sent to the USCG regarding the need for Pinole Shoal dredging.

PORTS Work Group- Troy Hosmer advised that there was nothing to report.

Prevention through People Work Group- Nothing to report.

PORTS Report- Marcus Freeling

- Advised that the UP Railroad Bridge wind station is still offline but should be back up soon. Power has been restored to the station but restart needs to be done manually.
- Advised that most PORTS IP modems have been upgraded. The final three modems will be installed.
- Advised that equipment associated with the Pier 17 visibility sensor will need to be rearranged due to a conflict with USGS equipment at the location.
- Advised that PORTS data is publicly available through NOAA's Tides and Currents website.

Public Comment-

- Justin Taschek, Port of Oakland, advised of the proposed Oakland A's ballpark project at Howard Terminal. An Environmental Impact Report (EIR) is being prepared and an amendment is proposed to the city's General Plan which includes public comment (agency contact list attached). Lease terms are being negotiated. The timeline is to be determined. The site is close to maritime industry which has raised concerns over recreational vessels and stadium lighting. Capt. Korwatch advised that she attended a meeting with the A's about the project and it seems to be moving forward. The A's have been invited to present the project to the HSC at a future meeting. Linda Scourtis, BCDC, advised that the project will require changes to the Seaport and Bay Plans which is a lengthy process. Information will be posted to the Marine Exchange website. Justin Taschek advised that comments on the project need to be submitted in writing.

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John Berge suggested that the Navigation Work Group review the project. Capt. Carr advised that the Bar Pilots have already met with the A's and voiced concerns.

- Tony Johnson, Tradewinds Sailing School, asked about changes to Preferred Channel Buoys near the Richmond Bridge which have caused confusion. A discussion ensued and the USCG advised they would look into the issue and get back.

Old Business- None

New Business- None

Next Meeting-

1000-1200, February 14, 2019
Port of San Francisco, Pier 1, Bayside Conference Room
The Embarcadero, San Francisco, CA

Adjournment-

A motion to adjourn was made and seconded. The motion passed without dissent and the meeting adjourned at 11:15.

Respectfully submitted:



Capt. Lynn Korwatch

PREVENTION / RESPONSE - SAN FRANCISCO HARBOR SAFETY STATISTICS			
November 2018			
PORT SAFETY CATEGORIES*	Nov-2018	Nov-2017	**3yr Avg
Total Number of Port State Control Detentions:	0	2	0.33
SOLAS (0), STCW (0), MARPOL (0), ISM (0), ISPS (0)			
Total Number of COTP Orders:	1	3	3.17
Navigation Safety (0), Port Safety & Security (1), ANOA (0)			
Marine Casualties (reportable CG 2692) within SF Bay:	6	11	9.64
Allision (1), Collision (0), Fire (0), Capsize (0), Grounding (1), Sinking (0)			
Steering (0), Propulsion (2), Personnel (1), Other (1), Power (0)			
Total Number of (routine) Navigation Safety issues/Letters of Deviation:	1	1	2.17
Radar (1), Gyro (0), Steering (0), Echo Sounder (0), AIS (0)			
ARPA (0), Speed Log (0), R.C. (0), Other (0)			
Reported or Verified "Rule 9" or other Navigational Rule Violations:	0	0	0.44
Significant Waterway events/Navigation related Cases:	0	0	0.39
Total Port Safety (PS) Cases opened	8	17	16.14
MARINE POLLUTION RESPONSE			
Pollution Discharge Sources (Vessels)	Nov-2018	Nov-2017	**3yr Avg
U.S. Commercial Vessels	1	0	0.67
Foreign Freight Vessels	0	0	0.06
Public Vessels	0	0	0.53
Commercial Fishing Vessels	0	0	0.44
Recreational Vessels	12	4	2.94
Pollution Discharge Sources (Facilities)			
Regulated Waterfront Facilities	3	0	0.17
Regulated Waterfront Facilities - Fuel Transfer	0	0	0.00
Other Land Sources	10	1	1.53
Mystery Spills - Unknown Sources	8	5	4.14
Number of Pollution Incidents within San Francisco Bay			
Spills < 10 gallons	3	4	3.56
Spills 10 - 100 gallons	0	1	0.86
Spills 100 - 1000 gallons	0	0	0.14
Spills > 1000 gallons	0	0	0.00
Spills - Unknown Size	31	5	5.89
Total Pollution Incidents	34	10	10.44
Oil Discharge/Hazardous Materials Release Volumes by Spill Size			
Estimated spill amount from U.S. Commercial Vessels	1.00	0.00	7.37
Estimated spill amount from Foreign Freight Vessels	0.00	0.00	8.47
Estimated spill amount from Public Vessels	0.00	0.00	2.42
Estimated spill amount from Commercial Fishing Vessels	0.00	0.00	7.38
Estimated spill amount from Recreational Vessels	7.00	65.00	18.88
Estimated spill amount from Regulated Waterfront Facilities	1.00	0.00	0.14
Estimated spill amount from Regulated Waterfront Facilities - Fuel Transfer	0.00	0.00	0.00
Estimated spill amount from Other Land Sources	0.00	5.00	10.59
Estimated spill amount from Unknown Sources (Mystery Sheens)	unk	unk	0.00
Total Oil Discharge and/or Hazardous Materials Release (Gallons)	9.00	70.00	55.25
Penalty Actions			
Civil Penalty Cases	0	0	0.00
Notice of Violations	0	1	0.25
Letters of Warning	2	2	2.28
Total Penalty Actions	2	3	2.53
* NOTE: Values represent all cases within the HSC jurisdiction during the period. Significant cases are detailed in the narrative.			
** NOTE: Values represent an average month over a 36 month period for the specified category of information.			

SIGNIFICANT PORT SAFETY AND SECURITY CASES (NOV 2018)

MARINE CASUALTIES

Loss of propulsion (11NOV18): A foreign flag bulk carrier experienced a loss of propulsion while dropping anchor at Anchorage 9. The vessel safely anchored and was able to regain ahead propulsion but not astern propulsion. A COTP Order was issued requiring the vessel to remain at Anchorage 9 until causative factors could be identified and the vessel's main propulsion was restored. Class and Coast Guard attended the vessel and witnessed satisfactory operation of the vessel's main propulsion and associated systems. LOP was not attributed to fuel switching. The COTP Order was lifted. Case closed.

Allision (23NOV18): A U.S. flag ferry vessel allided with sections of the sea wall at the San Francisco ferry terminal while attempting to moor, damaging the vessel's hull. The Coast Guard issued an 835 operational control until Coast Guard attended the vessel to witness satisfactory operation of the vessel's main propulsion and associated systems and until permanent repairs could be made. Hull repairs were approved and satisfactory propulsion tests were conducted. Case pends due to ongoing investigation.

GENERAL SAFETY CASES

General Safety (29NOV18): Multiple mooring lines on a foreign flag container vessel parted due to sustained high winds while moored at the Oakland Outer Harbor Berth. Five tugs responded and realigned the vessel back to the pier. The vessel changed out the mooring lines which were approved by the Class Surveyor and to Coast Guard satisfaction. Case closed.

NAVIGATIONAL SAFETY

LOD, Inoperable X-Band Radar, (22NOV18): A foreign vessel was issued an inbound LOD due to inoperable X-Band radar. A technician attended the vessel, repaired the radar, and provided a copy of the report to the Coast Guard. Inbound LOD was lifted. Case closed.

SIGNIFICANT INCIDENT MANAGEMENT DIVISION CASES

Letter of Warning (LOW), (09NOV18): A commercial uninspected barge was reported as partially submerged by the San Francisco Yacht Club. A light sheen was observed around the vessel after the initial sinking event. The construction company hired divers to conduct an assessment of the barge and apply necessary patches. An LOW was issued to the construction company. Case closed.

Letter of Warning (LOW), (14NOV18): A 36ft vessel sank at the pier in the Suisun City Marina and discharged diesel which formed a sheen around the vessel. The marina responded with absorbent pads and boom. The owner of the vessel hired contractors to remove the vessel. The sheen was unrecoverable. An LOW was issued to the owner. Case closed.

PREVENTION / RESPONSE - SAN FRANCISCO HARBOR SAFETY STATISTICS			
December 2018			
PORT SAFETY CATEGORIES*	Dec-2018	Dec-2017	**3yr Avg
Total Number of Port State Control Detentions: SOLAS (0), STCW (0), MARPOL (0), ISM (0), ISPS (0)	0	0	0.33
Total Number of COTP Orders: Navigation Safety (1), Port Safety & Security (1), ANOA (0)	2	1	3.22
Marine Casualties (reportable CG 2692) within SF Bay: Allision (1), Collision (1), Fire (0), Capsize (0), Grounding (0), Sinking (0) Steering (2), Propulsion (0), Personnel (1), Other (1), Power (0)	6	8	9.81
Total Number of (routine) Navigation Safety issues/Letters of Deviation: Radar (1), Gyro (0), Steering (0), Echo Sounder (0), AIS (1) ARPA (0), Speed Log (0), R.C. (0), Other (0)	2	2	2.19
Reported or Verified "Rule 9" or other Navigational Rule Violations:	0	0	0.44
Significant Waterway events/Navigation related Cases:	0	0	0.39
Total Port Safety (PS) Cases opened	10	11	16.39
MARINE POLLUTION RESPONSE			
Pollution Discharge Sources (Vessels)	Dec-2018	Dec-2017	**3yr Avg
U.S. Commercial Vessels	2	0	0.72
Foreign Freight Vessels	0	0	0.06
Public Vessels	0	1	0.53
Commercial Fishing Vessels	0	0	0.44
Recreational Vessels	7	3	3.14
Pollution Discharge Sources (Facilities)			
Regulated Waterfront Facilities	1	0	0.19
Regulated Waterfront Facilities - Fuel Transfer	0	0	0.00
Other Land Sources	2	0	1.58
Mystery Spills - Unknown Sources	5	3	4.28
Number of Pollution Incidents within San Francisco Bay			
Spills < 10 gallons	6	3	3.72
Spills 10 - 100 gallons	1	1	0.89
Spills 100 - 1000 gallons	0	0	0.14
Spills > 1000 gallons	0	0	0.00
Spills - Unknown Size	10	3	6.17
Total Pollution Incidents	17	7	10.92
Oil Discharge/Hazardous Materials Release Volumes by Spill Size			
Estimated spill amount from U.S. Commercial Vessels	0.50	0.00	7.38
Estimated spill amount from Foreign Freight Vessels	0.00	0.00	8.47
Estimated spill amount from Public Vessels	0.00	15.00	2.42
Estimated spill amount from Commercial Fishing Vessels	0.00	0.00	7.38
Estimated spill amount from Recreational Vessels	100.00	60.00	21.66
Estimated spill amount from Regulated Waterfront Facilities	0.00	0.00	0.14
Estimated spill amount from Regulated Waterfront Facilities - Fuel Transfer	0.00	0.00	0.00
Estimated spill amount from Other Land Sources	0.00	0.00	10.59
Estimated spill amount from Unknown Sources (Mystery Sheens)	unk	unk	0.00
Total Oil Discharge and/or Hazardous Materials Release (Gallons)	100.50	75.00	58.04
Penalty Actions			
Civil Penalty Cases	0	0	0.00
Notice of Violations	2	0	0.31
Letters of Warning	2	0	2.33
Total Penalty Actions	4	0	2.64
* NOTE: Values represent all cases within the HSC jurisdiction during the period. Significant cases are detailed in the narrative.			
** NOTE: Values represent an average month over a 36 month period for the specified category of information.			

SIGNIFICANT PORT SAFETY AND SECURITY CASES (DEC 2018)

MARINE CASUALTIES

Allision (04DEC18): A foreign flag oil tanker experienced an allision with the Amorco Pier while mooring. No damage was caused to the pier and only paint scratches to the vessel. Case closed.

Loss of steering (19DEC18): A foreign flag bulk freight vessel experienced a loss of steering while conducting pre-departure checks at Anchorage 9, San Francisco Bay. Causative factor was attributed to a steering pump failure. A class surveyor attended the vessel and witnessed satisfactory operation of the vessel's steering and associated systems. Coast Guard received and reviewed Class Surveyor report. Case closed.

Loss in propulsion (30DEC18): A U.S. flag passenger vessel experienced a loss of propulsion while transiting east of the Bay Bridge. Causative factor was attributed to low voltage to the vessel's starboard main engine. The vessel's engineers connected battery chargers and were able to restore power to the vessel's engine. Case closed.

VESSEL SAFETY CONDITIONS

Operational Control (11DEC18): A foreign flag bulk freight vessel experienced a loss of steering north of the San Francisco sea buoy while transiting inbound to San Francisco Bay. Based on the vessel's recent casualty history, the vessel was denied entry into port. A COTP Order was issued requiring the vessel to have a three tug escort, one to provide a continuous escort from the San Francisco sea buoy and the other two to provide continuous escort from Mile Rock. Causative factor was attributed to loose locking pins in the hydraulic pump. Class, Technicians, and Coast Guard attended the vessel and witnessed satisfactory operation of the vessel's steering and associated systems. Case closed.

Parted Mooring Lines (24DEC18): Two mooring lines for a foreign flag bulk carrier parted at the Port of Benicia during cargo operations. Three tugs were on scene holding the vessel from moving further away from the pier. The vessel had replacement lines and reported no other damage. Port of Benicia reported one damaged ballard. Case closed.

NAVIGATIONAL SAFETY

Letter of Deviation (LOD), X-Band Radar (01DEC18): Vessel was issued an inbound LOD due to an inoperable X-band radar. A technician attended the vessel, effected repairs, and sent Coast Guard a report for review. Inbound LOD was lifted. Case closed.

Letter of Deviation (LOD), Inop AIS Plug (04DEC18): Vessel was issued an inbound LOD due to an inoperable AIS plug. A technician attended the vessel, effected repairs, and sent Coast Guard a report for review. Inbound LOD was lifted. Case closed.

SIGNIFICANT INCIDENT MANAGEMENT DIVISION CASES

Notice of Violation, (04DEC18): On 04DEC18, a sheen was reported from a 54 ft landing craft. In coordination with hired divers, the vessel was boomed. On 06DEC18, the vessel was refloated and an initial pollution abatement was conducted. The vessel was towed to a local boat yard to be hauled out. The vessel was officially removed from the water on 13DEC18 and final pollution abatement was completed on 18DEC18. Case closed.

Letter of Warning, (05DEC18): There was a report of a submerged vessel adjacent to Brisbane Marina, CA. Initial investigation determined the vessel had capsized and sunk while anchored outside of the marina. At least 10 gallons of fuel were reported to be onboard the vessel. The vessel was raised and towed to a designated dock at the marina and approximately 50 gallons of petroleum products were removed. All sources of pollution were removed from the vessel. Case closed.

**Harbor Safety Committee
Of the San Francisco Bay Region**

**Report of the
U.S. Army Corps of Engineers, San Francisco District
January 10, 2019**

1. CORPS O&M DREDGING PROGRAM

The following report covers the planned FY 2019 dredging program for San Francisco Bay. While this program is subject to change based on a number of variables, it is based on actual FY 19 appropriations including the FY 2019 Work Plan. Please refer to the Local Notice to Mariner for details of dredge operations.

FY 2018 - 2019 DREDGING

- a. **SF Main Ship Channel** – FY 18 Project was executed based on 2 dredging episodes, the first of which was completed by the Essayons on 6/6/18 and the second in October 2018 with the West Coast Hopper Contract as dredged by the Stuveysant. FY 19 is under planning with dredging expected to be completed by June by the Essayons.
- b. **Richmond Inner Harbor** – FY 18 dredging contract was awarded on 4 September but a protest was received by the District thereby delaying mobilization. Protest was dismissed in October, with NTP issued 16 Oct and dredging completed in November. Dredging included reach 11, which has long been a port and Bar Pilots priority. FY19 planning for the Richmond Inner is underway with expected award in May of 2019.
- c. **Richmond Outer Harbor (and Richmond Long Wharf)** – In alignment with last year’s proposal to alternate Hopper dredging between Pinole Shoals and Richmond Outer, dredging for Richmond Outer dredging was conducted with the Essayons and completed in November. Richmond Outer is expected to be deferred in FY19.
- d. **Oakland Harbor** – The 2018 dredge cycle started in September with planned upland disposal. Due to smaller than expected production rates the District worked with resource agencies to continue upland placement through the middle of January. The FY 19 Dredging contract is being aggressively planned for award in May but will require significant coordination with resource agencies to execute on that schedule.
- e. **Redwood City Harbor** – The 2019 dredging contract is being planned for award in April.
- f. **San Pablo Bay (Pinole Shoal)** – In alignment with last year’s proposal to alternate Gov’t Hopper dredging, Pinole will be dredged in 2019. Action is planned for June 2019.
- g. **Suisun Bay Channel (and New York Slough)** – 2019 Clamshell award is being planned for July.

2. DEBRIS REMOVAL – Debris removal for November 2018 was 62 tons. Raccoon: 20 tons; other boats: 42 tons, including 7 abandoned vessels. Debris removal for December 2018 was 50 tons. Raccoon: 15 tons, including 1 abandoned vessel; other boats: 35 tons, including 6 abandoned vessels. Averages for November and December from 2008 to 2017 are 58 tons (Range: 5-135 tons) and 88.5 tons (Range: 0-174 tons), respectively.

BASEYARD DEBRIS COLLECTION TOTALS:

MONTH	RACCOON	DILLARD	MISC	TOTAL
2018	TONS	TONS	TONS	TONS
JAN	45	0	50	95
FEB	20	18	50	88
MAR	20	46.5	17	83.5
APR	26	35.5	15	76.5
MAY	3	10	15	28
JUN	10	25	75	110
JUL	10	13.5	105	128.5
AUG	26	5	27	58
SEP	20	28.5	11	59.5
OCT	4	12	7	23
NOV	20	0	42	62
DEC	15	0	35	50

YR TOTAL
862

3. UNDERWAY OR UPCOMING HARBOR IMPROVEMENTS

None to report.

4. EMERGENCY (URGENT & COMPELLING) DREDGING

None to report.

5. OTHER WORK

San Francisco Bay to Stockton – The study is now being conducted by the Wilmington District to more efficiently match the study with available resources. **The Tentatively Selected Plan (TSP) milestone meeting for Phase I (Western Reach) of the project was held on 29 June 2016 with a recommended plan to deepen the Phase I reach of the project from a depth of -35 feet to -38 feet MLLW. The Draft report is being scheduled for public release in April of 2019.**

HYDROGRAPHIC SURVEY UPDATE

Address of Corps' web site for completed hydrographic surveys:

<http://www.spn.usace.army.mil/Missions/Surveys,StudiesStrategy/HydroSurvey.aspx>

The following surveys are posted:

Alameda Point Navigation Channel: Condition survey of May 23, 2018.
Berkeley Marina (Entrance Channel): Condition survey of July 9, 2018.
Islais Creek Channel: Condition survey of July 17, 2018.
Larkspur Ferry Channel: Condition survey of July 9, 2018.
Main Ship Channel: Condition survey of April 5, 2018.
Mare Island Strait: Condition survey of July 10, 2018.
Marinship Channel (Richardson Bay): Condition survey of December 7, 2017.
Napa River: Condition survey of May 9-10, 2018.
Northship Channel: Condition survey of June 29, 2018.
Oakland Entrance Channel (Reach 1A-1C): Post-dredge surveys of January 17 & 19, 2018.
Oakland Inner Harbor (Reach 4-6): Post-dredge survey of December 10-12, 2018.
Oakland Outer Harbor (Reach 7-8): Post-dredge survey of October 5, 9, 22 & 26, 2018.
Petaluma River (Across-the-Flats): Condition survey of September 12-14, 2014.
Petaluma River (Main Channel): Condition survey of December 12-13, 2017.
Petaluma River (Extended Channel): Condition survey of March 19-26, 2018.
Pinole Shoal Channel: Condition survey of July 23-26, 2018.
Redwood City Harbor: Condition survey of February 7-8, 2018.
Richmond Inner Harbor: Condition survey of June 26, 2018.
Richmond Inner Harbor (Santa Fe Channel): Condition survey of December 20, 2016.
Richmond Outer Harbor (Longwharf): Post-dredge survey of October 23, 2018.
Richmond Outer Harbor (Southampton Shoal): Post-dredge survey of October 26, 2018.
Sacramento River Deep Water Ship Channel: Condition survey of May 17-21, 2018.
San Bruno Shoal: Condition survey of July 11, 2018.
San Leandro Marina (and Channel): Condition survey of March 30 and April 1, 2015.
San Rafael (Across-the-Flats): Condition survey of September 24, 2018.
San Rafael (Creek): Condition survey of September 24, 2018.
Stockton Ship Channel: Condition survey of May 14-17, 2018.
Suisun Bay Channel (Reach 2): Post-dredge survey of October 15, 2018.
Suisun Bay Channel (Reach 3A-E): Post-dredge survey of October 17, 2018.
Suisun Bay Channel (Bullshead Reach): Condition survey of April 19, 2017.
Suisun Bay Channel (New York Slough): Post-dredge survey of October 21, 2018.

Disposal Site Condition Surveys:

SF-08 (Main Ship Channel Disposal Site): Condition survey of October 31, 2018.

SF-09 (Carquinez): Condition survey of September 17, 2018.

SF-10 (San Pablo Bay): Condition survey of September 17, 2018.

SF-11 (Alcatraz Island): Condition survey of December 28, 2018.

SF-16 (Suisun Bay Disposal Site): Condition survey of July 3, 2018.

SF-17 (Ocean Beach Disposal Site): Condition survey of November 7, 2018.

Requested Surveys:

Pre/Post-dredge and condition surveys are scheduled to occur thru the year for all of San Francisco District's in-bay projects which are planned to be dredged in FY19.

NEW WEB ADDRESS – USACE WORK PLAN:

<http://www.usace.army.mil/Missions/Civil-Works/Budget/>

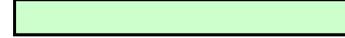
O&M DREDGING PLAN FOR FY19*

4-Jan-19

Project	Bid Opening Award Date	FY 2018			FY 2019									FY 2020			Estimated CY	Planned Placement Site	
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC			
SF Main Ship Channel	N/A		█							█								350kcy	OBDS/ SF-8
Humboldt Bar & Entrance	N/A	█									█							600kcy	HOODS
Pinole Shoal	N/A	█	█								█	█	█	█	█	█		300kcy	SF-11/SF-10
Crescent City	3 Aug/31 Aug												█	█	█	█	█	100kcy	Upland/Hoods
Redwood City Harbor	22 Apr/6 May	█	█						█	█	█	█	█	█	█	█	█	300kcy	SF-11
Richmond Inner Harbor	7 May/21 May	█	█	█									█	█	█	█	█	350kcy	DODS/upland least cost
Combined Sac/San Joaquin	22 May/5 June	█	█	█									█	█	█	█	█	350kcy	Various Upland
Oakland Harbor	20 June/8 July	█	█	█									█	█	█	█	█	750kcy	DODS/upland least cost
Suisun Bay Channel	9 July/23 July	█	█	█									█	█	█	█	█	175kcy	SF-16



Ongoing Contracts
 New SPN Contract including Mobilization
 West Coast Hopper Contract
 Government Dredge



Environmental Window

◆ Bid Opening

◆ Contract Award

* Program execution is based on the FY19 President's Budget, Workplan and Federal Standard plan for each project.



Harbor Safety Committee of the
San Francisco Bay Region Clearing House
c/o Marine Exchange of the San Francisco Bay Region
505 Beach Street, Suite 300
San Francisco, California 94133-1131
415-441-6600 fax 415-441-3080 hsc@sfmtx.org

San Francisco Clearinghouse Report

January 10, 2019

- ✎ In November and December the clearinghouse did not contact OSPR regarding any possible escort violations.
- ✎ In November and December the clearinghouse did not receive any notifications of vessels arriving at the Pilot Station without escort paperwork.
- ✎ The clearinghouse has contacted OSPR a total of 1 time in 2018 regarding possible escort violations. The clearinghouse did not contact OSPR in 2017 about possible escort violations. The clearinghouse contacted OSPR 1 time in 2016 about a possible escort violation. The clearinghouse contacted OSPR 3 times in 2015 about possible escort violations. The clearinghouse contacted OSPR 5 times regarding possible escort violations in 2014. The clearinghouse contacted OSPR 1 time in 2013. The clearinghouse contacted OSPR 3 times in 2012 regarding possible escort violations, 3 times in 2011, 6 times in 2010, 8 time 2009; 4 times 2008; 9 times in 2007; 9 times in 2006; 16 times in 2005; 24 times in 2004; twice in 2003; twice in 2002; 6 times in 2001; 5 times in 2000.
- ✎ In November there were 78 tank vessel arrivals; 10 ATBs, 4 Chemical Tankers, 15 Chemical/Oil Tankers, 22 Crude Oil Tankers, 15 Product Tankers, and 12 Tugs with Barges. In November there were 259 total vessel arrivals.
- ✎ In December there were 97 tank vessel arrivals; 10 ATBs, 2 Chemical Tankers, 16 Chemical/Oil Tankers, 27 Crude Oil Tankers, 1 LPG, 28 Product Tankers, and 13 Tugs with Barges. In December there were 280 total vessel arrivals.

San Francisco Bay Clearinghouse Report For December 2018

San Francisco Bay Region Totals

	<u>2018</u>		<u>2017</u>	
Tanker arrivals to San Francisco Bay	74		71	
ATB arrivals	10		14	
Barge arrivals to San Francisco Bay	13		17	
Total Tanker and Barge Arrivals	97		102	
Tank ship movements & escorted barge movements	305		325	
Tank ship movements	159	52.13%	181	55.69%
Escorted tank ship movements	129	42.30%	136	41.85%
Unescorted tank ship movements	30	9.84%	45	13.85%
Tank barge movements	146	47.87%	144	44.31%
Escorted tank barge movements	20	6.56%	16	4.92%
Unescorted tank barge movements	126	41.31%	128	39.38%

Percentages above are percent of total tank ship movements & escorted barge movements for each item.

Escorts reported to OSPR 0 0

Movements by Zone	Zone 1	%	Zone 2	%	Zone 4	%	Zone 6	%	Total	%
Total movements	191		303		0		116		610	
Unescorted movements	92	48.17%	156	51.49%	0	0.00%	56	48.28%	304	49.84%
Tank ships	76	39.79%	126	41.58%	0	0.00%	52	44.83%	254	41.64%
Tank barges	16	8.38%	30	9.90%	0	0.00%	4	3.45%	50	8.20%
Escorted movements	99	51.83%	147	48.51%	0	0.00%	60	51.72%	306	50.16%
Tank ships	90	47.12%	127	41.91%	0	0.00%	52	44.83%	269	44.10%
Tank barges	9	4.71%	20	6.60%	0	0.00%	8	6.90%	37	6.07%

Notes:

1. Information is only noted for zones where escorts are required.
2. All percentages are percent of total movements for the zone.
3. Every movement is counted in each zone transited during the movement.
4. Total movements is the total of all unescorted movements and all escorted movements.

San Francisco Bay Clearinghouse Report For 2018

San Francisco Bay Region Totals

	<u>2018</u>		<u>2017</u>	
Tanker arrivals to San Francisco Bay	787		797	
ATB arrivals	123		146	
Barge arrivals to San Francisco Bay	143		150	
Total Tanker and Barge Arrivals	930		1,093	
Tank ship movements & escorted barge movements	3,743		3,562	
Tank ship movements	2,058	54.98%	2,075	58.25%
Escorted tank ship movements	1,613	43.09%	1,618	45.42%
Unescorted tank ship movements	445	11.89%	457	12.83%
Tank barge movements	1,685	45.02%	1,487	41.75%
Escorted tank barge movements	234	6.25%	218	6.12%
Unescorted tank barge movements	1,451	38.77%	1,269	35.63%

Percentages above are percent of total tank ship movements & escorted barge movements for each item.

Escorts reported to OSPR 0 0

Movements by Zone	Zone 1	%	Zone 2	%	Zone 4	%	Zone 6	%	Total	%
Total movements	2,308		3,646		0		1,589		7,543	
Unescorted movements	1,069	46.32%	1,839	50.44%	0	0.00%	722	45.44%	3,630	48.12%
Tank ships	864	37.44%	1,404	38.51%	0	0.00%	646	40.65%	2,914	38.63%
Tank barges	205	8.88%	435	11.93%	0	0.00%	76	4.78%	716	9.49%
Escorted movements	1,239	53.68%	1,807	49.56%	0	0.00%	867	54.56%	3,913	51.88%
Tank ships	1,132	49.05%	1,577	43.25%	0	0.00%	775	48.77%	3,484	46.19%
Tank barges	107	4.64%	230	6.31%	0	0.00%	92	5.79%	429	5.69%

Notes:

1. Information is only noted for zones where escorts are required.
2. All percentages are percent of total movements for the zone.
3. Every movement is counted in each zone transited during the movement.
4. Total movements is the total of all unescorted movements and all escorted movements.



CALIFORNIA STATE LANDS COMMISSION

HARBOR SAFETY COMMITTEE MONTHLY REPORT - NOVEMBER COMPARISON

VESSEL TRANSFERS

	Total Transfers	Total Vessels Monitored	Total Transfers Percentage
NOVEMBER 1 - 30, 2017	231	68	29.44
NOVEMBER 1 - 30, 2018	211	67	31.75

CRUDE OIL / PRODUCT TOTALS

	Crude Oil (D)	Crude Oil (L)	Overall Product (D)	Overall Product (L)	GRAND TOTAL
NOVEMBER 1 - 30, 2017	16,317,000		20,801,300	8,499,059	29,300,359
NOVEMBER 1 - 30, 2018	14,849,300	200,000	20,451,964	7,328,322	27,780,286

OIL SPILL TOTAL

	<u>TERMINAL</u>	<u>VESSEL</u>	<u>Total</u>	<u>Gallons Spilled</u>
NOVEMBER 1 - 30, 2017	0	0	0	0
NOVEMBER 1 - 30, 2018	1	0	1	Crude ANS - 42 Gal.

Disclaimer:

Please understand that the data is provided to the California State Lands Commission from a variety of sources; the Commission cannot guarantee the validity of the data provided to it.



CALIFORNIA STATE LANDS COMMISSION

HARBOR SAFETY COMMITTEE MONTHLY REPORT - DECEMBER COMPARISON

VESSEL TRANSFERS

	Total Transfers	Total Vessels Monitored	Total Transfers Percentage
DECEMBER 1 - 31, 2017	219	65	29.68
DECEMBER 1 - 31, 2018	211	57	27.01

CRUDE OIL / PRODUCT TOTALS

	Crude Oil (D)	Crude Oil (L)	Overall Product (D)	Overall Product (L)	GRAND TOTAL
DECEMBER 1 - 31, 2017	15,682,502		20,433,202	8,829,318	29,262,520
DECEMBER 1 - 31, 2018	15,958,000		20,437,800	7,971,206	28,409,006

OIL SPILL TOTAL

	<u>TERMINAL</u>	<u>VESSEL</u>	<u>Total</u>	<u>Gallons Spilled</u>
DECEMBER 1 - 31, 2017	0	0	0	0
DECEMBER 1 - 31, 2018	0	0	0	0

Disclaimer:

Please understand that the data is provided to the California State Lands Commission from a variety of sources; the Commission cannot guarantee the validity of the data provided to it.



The Water-Go-Round

Dr. Joseph Pratt, CEO & CTO

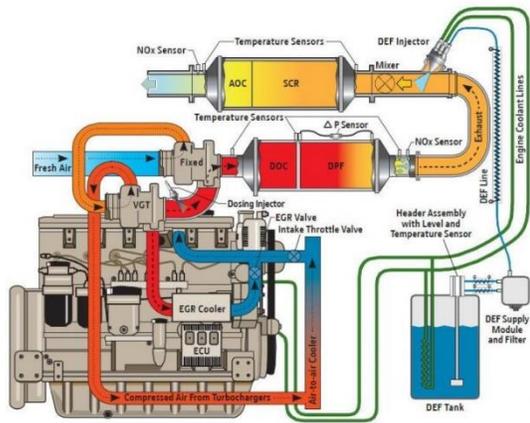
GOLDEN GATE ZERO EMISSION MARINE

Harbor Safety Committee Meeting
January 10, 2018



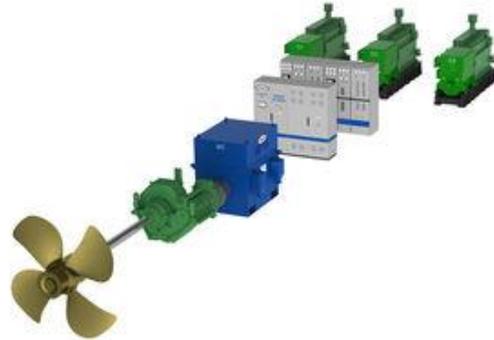
Emission Reduction Technology Options

Tier 4 Diesel



NOx: Low
 SOx: Low
 CO₂: no change
 (0 if biofuel)

Electric Hybrid



NOx: Low
 SOx: Low
 CO₂: 10%-40% lower

LNG



NOx: Low
 SOx: 0
 CO₂: +/- 10%

All-electric Battery or Hydrogen Fuel Cell



NOx: 0
 SOx: 0
 CO₂: 0

Now

Next

Bridge

Final

Regulatory Benefits of Zero

- **Meet forced compliance measures today and in the future**

Norway Mandates World's First Zero-Emission ECA for No Later Than 2026

Friday, May 4, 2018

Share Share Tweet Follow 6,149 followers

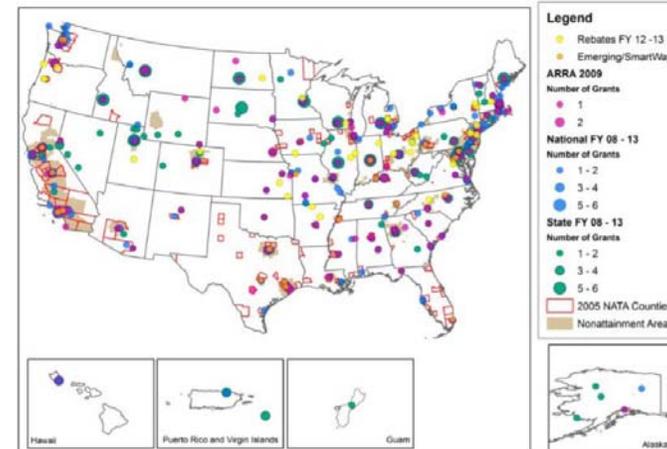


- **Take advantage of regulation-based incentives**

Report: 28 of 100 World's Largest Ports Offer Incentives for Green Ships



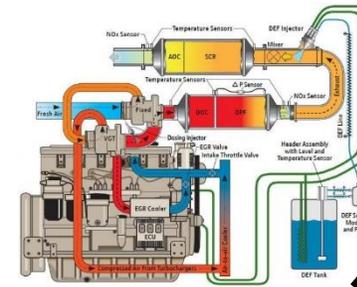
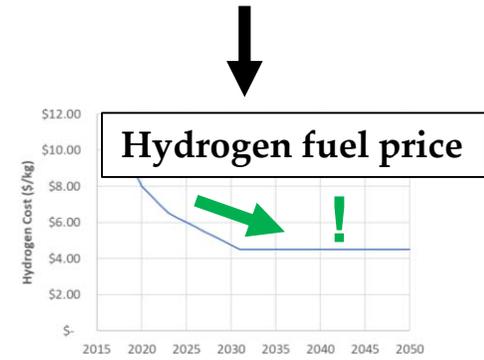
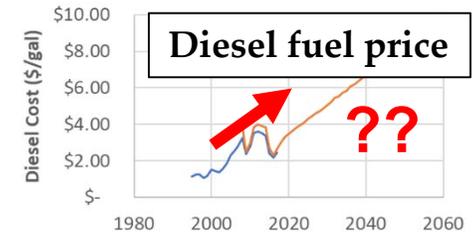
Today, 28 of the 100 world's largest ports in terms of total cargo volume handled offer incentives for environmentally-friendly ships, a new report released by the International Transport Forum (ITF) shows.



**Carl Moyer
& DERA
Grants**

Business Benefits of Zero

- Higher revenue and Lower total cost of ownership
- Fuel price certainty
- Less complicated on-board systems with less frequent and simpler maintenance
- No noise or exhaust = happier customers
- Green marketing = more customers
- Win public contracts



Diesel Engine:
100's of moving parts



Fuel cell:
< 5 moving parts

Choose Red and White Fleet as Your Environmentally Friendly Cruise Partner in San Francisco



"Your environmentally friendly cruise partner"

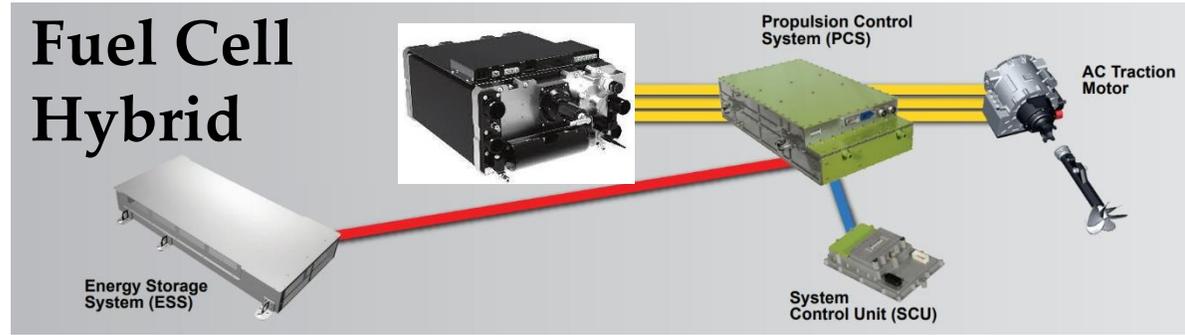
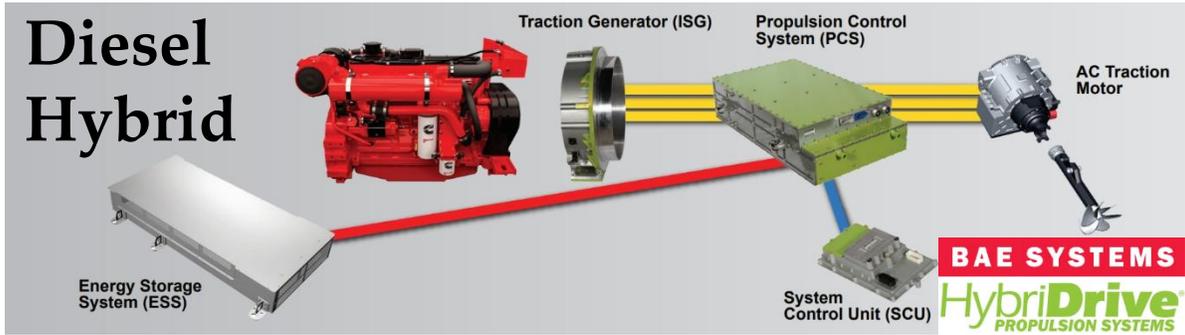
Fuel cell: Directly converts hydrogen to electricity, and is used all around us today.



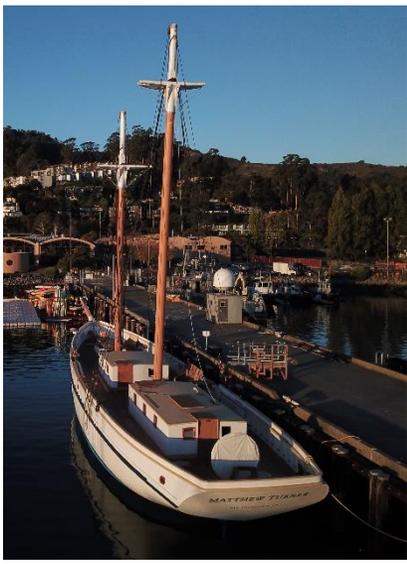
Going In: H₂ and air
Going Out: Electricity
 Water
 Heat (150 F)
 Warm humid air



Marine hydrogen fuel cell systems can use off-the-shelf technology



Enhydra



Matthew Turner



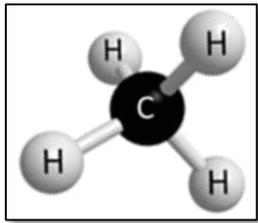
Water-Go-Round

Vessels of all kinds can be powered by fuel cell propulsion systems



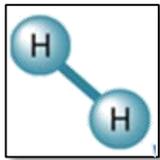
Reference: *Practical Application Limits of Fuel Cells and Batteries for Zero Emission Vessels*
(download from: maritime.sandia.gov)

Hydrogen is a fuel similar to natural gas (CNG & LNG).
Fueling can be done by truck, similar to diesel.



Natural gas / LNG

power
water
CO
CO₂
CH₄
NO_x (smog)



Hydrogen / LH₂

- Non-toxic
- Not a GHG
- No possible water contamination if spilled

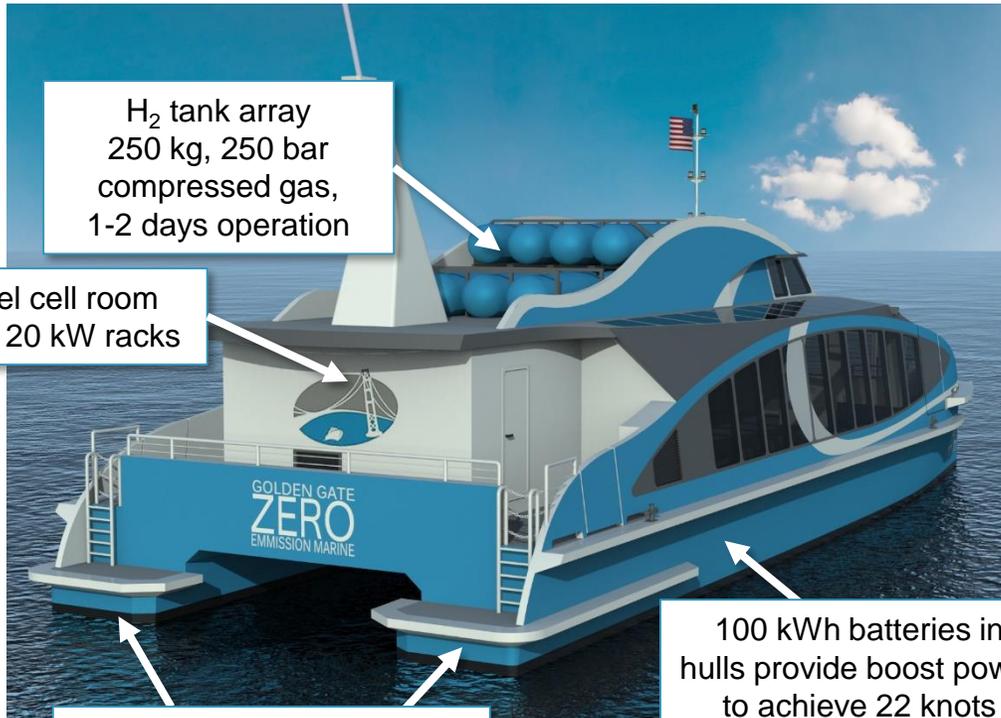


The Water-Go-Round



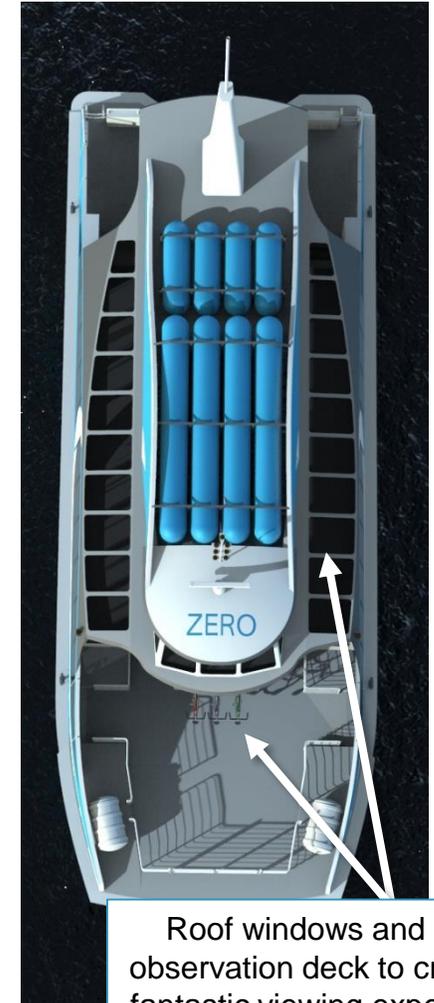
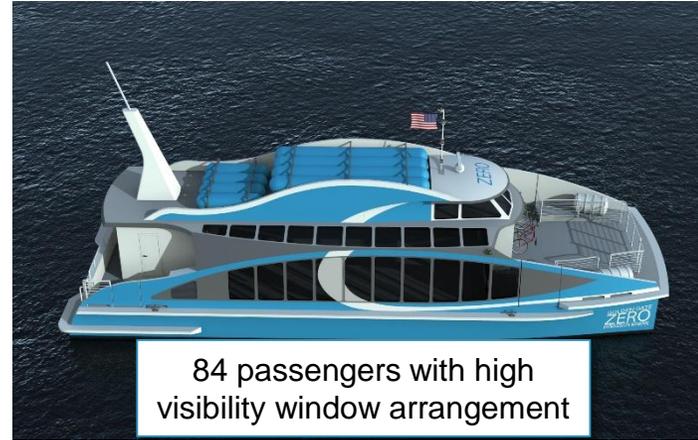
- Aluminum catamaran
- 70' / 21 m LOA
- 84 passenger (reconfigurable)
- 22 knot top speed
- 2x 300 kW electric motors
- 360 kW PEM fuel cell
- 100 kWh Li-ion battery
- H₂: 264 kg @ 250 bar

Water-Go-Round Features



300 kW (400 hp) shaft
motors (1 in each demi-hull)

100 kWh batteries in
hulls provide boost power
to achieve 22 knots



Key Milestones

Project Began	June 11, 2018
Keel Laying Ceremony	Nov. 8, 2018
First launch/christening	Sept. 1, 2019
Ferry In Service	Oct. 1, 2019
Three Months Data Collection Finished	Dec. 31, 2019
Draft Final Report to CARB Due	Feb. 14, 2020
Project Ends	March 30, 2020

Regulatory Review and Approval

- Subchapter T boat, with novel features:
 - Hydrogen
 - Li-ion batteries
- Engineering (ENG) @ HQ for design basis of H₂-related items (*IMO's IGF code and DNVGL rules*)
- Marine Safety Center as usual
- Sector SF for operation and fueling



2014



2016



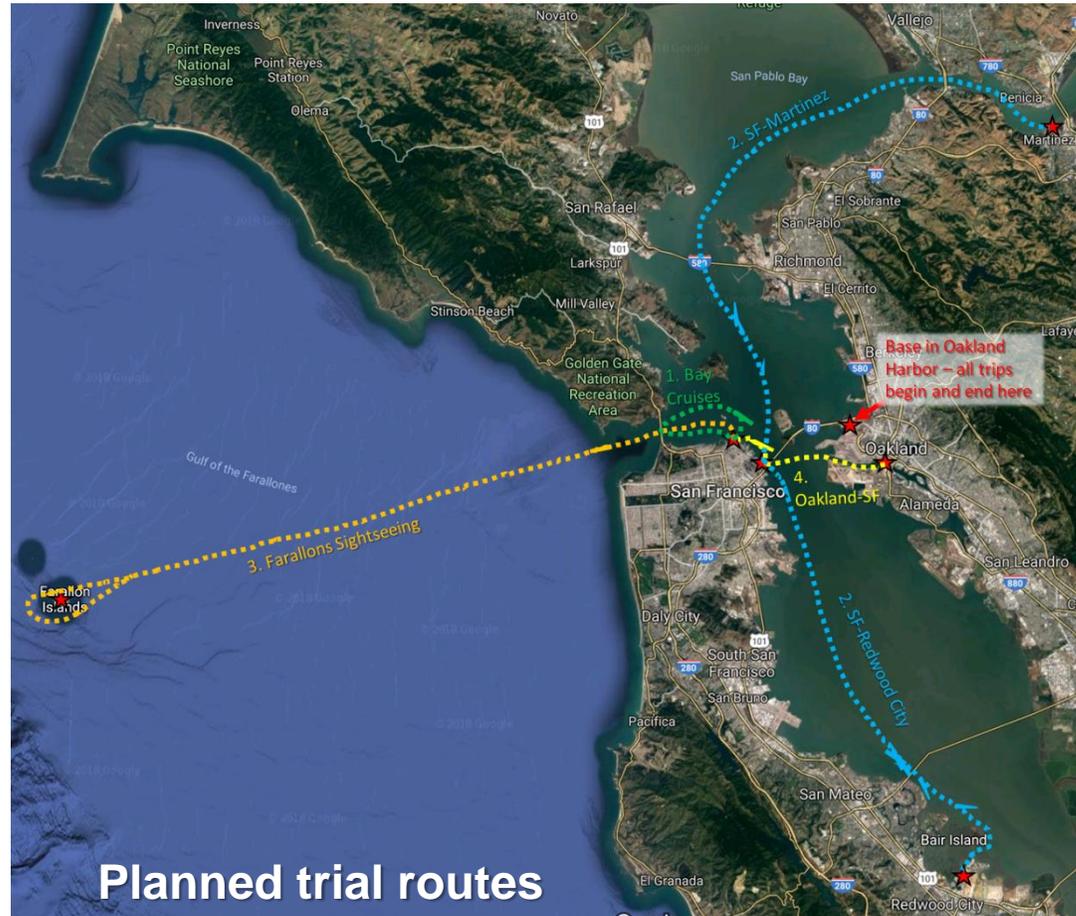
2018

The WGR will be on the water in Fall 2019 and will operate for at least 3 months in trials for CARB

Planned uses during the trial:

- Commuter ferry
- Excursion/tour boat
- Research/survey vessel
- Package/freight delivery
- Crew boat

We are looking for local partners who wish to use the WGR during the demonstration period – free of charge. Learn about the technology while helping us collect more data. Please contact Joe if you are interested!



After the project concludes, the vessel becomes wholly-owned by GGZEM and will be sold or chartered to an interested operator (April 2020)

The WGR project is a partnership

Project Lead



GOLDEN GATE
ZERO
EMISSION MARINE

Funding & Administration



CALIFORNIA
AIR RESOURCES BOARD



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT



This project is supported by the "California Climate Investments" (CCI) program

Cost-Sharing Partners

BAE SYSTEMS

HYDROGENICS



HEXAGON
COMPOSITES



Incat Crowther
EVER EVOLVING · EVER IMPROVING



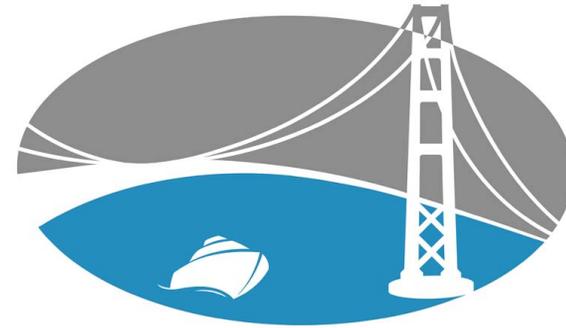
Thank You!

Contact information:

Joe Pratt

jpratt@ggzeromarine.com

(510) 788-5101



**GOLDEN GATE
ZERO
EMISSION MARINE**

waterground.com

ggzeromarine.com

Agency Contact List for Port of Oakland Howard Terminal – Proposed Ballpark

- **Port of Oakland**
Hon. Cestra Butner, President
Board of Port Commissioners
Port of Oakland
530 Water St
Oakland, CA 94607

- **California State Lands Commission**
Jennifer Lucchesi, Executive Director Jennifer.Lucchesi@slc.ca.gov
cc to: Sheri Pemberton, Chief of the External Affairs Division and Legislative Liaison, Sheri.Pemberton@slc.ca.gov
100 Howe Avenue, Suite 100 South
Sacramento, CA
(916) 574-1800

- **San Francisco Bay Conservation and Development Commission**
Brad McCrea
Regulatory Director
brad.mccrea@bcdca.gov
415-352-3615 Office

- **City of Oakland Planning and Zoning**
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