

# 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, October 11, 2018

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 10:01.

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; **Capt. Bob Carr** (M), San Francisco Bar Pilots; **Capt. Marie Byrd** (A), United States Coast Guard; **Ben Eichenberg** (A), San Francisco Baykeeper; **Jeff Ferguson** (M), NOAA; **Aaron Golbus** (M), Port of San Francisco; **Bob Gregory** (M), Foss Maritime Company; **Chris Hendry** (M), Chevron Shipping Company; **Capt. Thomas Kirsch** (M), Blue and Gold Fleet; **Andrew Marshall** (M), Port of Benicia; **Lt.Col. Travis Rayfield** (M), US Army Corps of Engineers; **Jeff Robbins** (M), General Steamship Corporation; **Julian Rose** (M), Andeavor; **Jeff Vine** (M), Port of Stockton.

The meetings are always open to the public.

### Approval of the Minutes-

A motion to accept the minutes of the September 13, 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. Marie Byrd

- Advised that this year's Fleet Week was very successful with 7,500 additional personnel and 35 local and state partners providing security for the event. Over 65 law enforcement vessels patrolled the bay and ferry security was increased. Catharine Hooper, Port of San Francisco

# Harbor Safety Committee

of the San Francisco Bay Region

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

Consultant, advised of the massive collaborative effort to support security and safety for Fleet Week and recognized the USCG Auxiliary and other participating agencies for their efforts. A question was asked about USCG boardings of commercial tugs. Capt. Byrd advised that boating safety was a priority with focus on both recreational and charter vessels. Commercial tugs with large numbers of passengers onboard were also subject to boarding and vessel inspection. Catherine Hooper advised that all personnel associated with Navy vessels were inspected. Capt. Byrd advised that Catharine Hooper was recognized by the Canadian consulate for her work with Fleet Week.

- Advised of a USCG MSIB issued regarding vessel air draft and overhead power lines. There were two recent incidents in which vessels struck power lines in the region.
- Advised of a USCG Safety Alert issued regarding a recent fatal gangway accident.
- Advised that Sector San Francisco anticipates sending personnel to assist with hurricane response.
- Advised that results from the El Faro investigation are being evaluated. Third party oversight and increased inspection enforcement are critical to prevention.
- LCDR Rebecca Deakin read from the September- 2018 Prevention/Response Report (attached). Several Letters of Warning were issued. A crane barge in the San Joaquin River hit PG&E power lines on September 14<sup>th</sup>.

## **Army Corps of Engineers Report- Lt.Col. Travis Rayfield**

- Advised that emergency response was a focus during Fleet Week. USACE personnel have been deployed to Florida to assist hurricane recovery.
- Read from the US Army Corps of Engineers, San Francisco District Report (attached). The dredge Essayons is currently dredging the Richmond Outer Harbor. The contract protest for Richmond Inner Harbor dredging has been resolved. Pinole Shoal dredging is deferred but USACE will work with the Dredge Work Group on the issue. Debris removal numbers were above average for September. Work on the SF Bay to Stockton study is postponed due to Hurricane Florence response. The FY 2019 Work Plan is being developed.
- In response to a question from Capt. Korwatch, Catharine Hooper advised that the placement of ships in the Fleet Week Parade of Ships is determined primarily by seniority and berthing order.

# Harbor Safety Committee

**of the San Francisco Bay Region**

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

## **Clearinghouse Report- Marcus Freeling (report attached)**

- Capt. Korwatch advised that there have been issues with vessels not submitting the required escort forms to the clearinghouse in a timely manner. The submission of escort forms is required for all escorted transits.

## **OSPR Report- Mike Zamora**

- Advised that changes have been made to OSPR's inland regulations and a 15 day comment period starts today. The regulations will be finalized and resubmitted after the comment period.
- Announced that John Koeppen, owner/operator of fishing vessel Lulu, has been appointed to the HSC as alternate member representing commercial fishing. Term ends on October 10, 2021.
- Advised that Bob Gregory will be retiring and a replacement HSC member position representing tug operators is being advertised.

## **NOAA Report- Jeff Ferguson**

- Advised that recent USACE surveys have been applied to NOAA charts.
- Advised that tide gauges in Bolinas Lagoon and Coyote Creek are being transferred to partner organizations and will no longer appear on the NOAA website. The data will still be available through the partner organizations.
- Advised that Coast Pilot 7 will include the International Inland Navigation Rules in Appendix B.
- Capt. Korwatch advised that she has been asked to give a presentation at the CeNCOOS meeting on November 14-15. The organization is interested in what meteorological data best helps mariners. Feedback is welcome. Jim Anderson advised that fisherman use meteorological information regularly and it would be beneficial to collaborate. Aside from PORTS, many stations are not centralized and data is on different sites. John Berge advised that funding was an issue.

## **State Lands Commission Report- Mike Moline**

- Read from the State Lands Commission September Report (attached).
- Advised that Prevention First 2018 was a very successful event and thanked all who participated.
- Advised that State Lands is hiring Marine Safety Specialists.

# Harbor Safety Committee

of the San Francisco Bay Region

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

## **International Sailing Series Report- Remy Cross, LeadDog Marketing Group**

- Remy Cross, LeadDog Marketing Group, and the Sail GP team gave a presentation to the committee on the Sail GP sailboat racing event being planned for San Francisco in May, 2019 (slides attached). Event plans are officially public. Practice days are tentatively scheduled for April 30, 2019 and May 3, 2019 with the actual sailboat races to take place on May 4-5, 2019. A technical base will be set up on Treasure Island. The races will be conducted on the City Front Race Course from 11:00 – 16:00. An event village will be located at the Yacht Club Peninsula. Inflatable stake marks will be used to mark the race box. Shoreline traffic will not be allowed during the races unless absolutely necessary. The race box is smaller than that of the America's Cup. The USCG and local agencies will help provide enforcement for the event and a centralized control room will be established. A medical plan and safety boats will be in place. 2,500 – 5,000 spectators are expected. Feedback is welcome. LCDR Rebecca Deakin, USCG, advised that race plans are not finalized yet and a Notice of Proposed Rulemaking will need to be issued. Aaron Golbus suggested that a stakeholders meeting be scheduled to discuss race plans. Capt. Korwatch asked if permits have been received for the race. Remy Cross advised that all required permits have been submitted but not all have been issued yet. Catharine Hooper advised that May is a busy time for cruise ships which may be impacted by the event. Capt. Carr proposed that the Navigation Work Group hold a meeting on race planning and Capt. Korwatch approved. Meeting details will be provided. Ben Eichenberg advised that after event cleanup and pollution prevention are priorities.

## **Work Group Reports-**

**Tug Work Group-** Bob Gregory advised that there was nothing to report

**Navigation Work Group-** Capt. Bob Carr advised that a Work Group meeting will be scheduled for Sail GP planning. Details will be provided by email.

**Ferry Operations Work Group-** Capt. Thomas Kirsch advised that there was nothing to report.

**Dredge Issues Work Group-** Julian Rose advised that Pinole Shoal dredging and channel depth are a continuing concern. Safety and economic issues must be balanced against environmental issues such as delta smelt protection. A condition survey is scheduled in late October.

**PORTS Work Group-** Nothing to report.

# Harbor Safety Committee

of the San Francisco Bay Region

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

**Prevention through People Work Group-** Nothing to report.

## **PORTS Report- Marcus Freeling**

- Advised that the UP Railroad Bridge wind station is still offline due to bridge electrical issues. Efforts will continue to be made to determine the status of electrical cable repairs.
- Advised that PORTS IP modems are in the process of being upgraded to newer models. The upgrades should improve connection and maintain functionality of PORTS stations.
- Advised that data for the Southampton Shoal LB6 buoy mounted current sensor has been intermittent recently. A malfunctioning antenna or radio interference could be the cause and the issue will be addressed.
- Advised that a team from NOAA will be conducting the annual maintenance of SF PORTS tide stations next week.
- Advised that PORTS data is publicly available through NOAA's Tides and Currents website. Additionally, the Marine Exchange website is being updated to include more information about SF PORTS. [www.sfmex.org](http://www.sfmex.org)

## **Public Comment-**

- Aaron Golbus advised that the Port of San Francisco has several spaces available along the waterfront for maritime partners. Tours of the facilities will be given tomorrow, 10:00 – 13:00.
- Capt. Korwatch announced that the upcoming AMSC meeting will be held on October 16<sup>th</sup> at the Port of Oakland.
- It was announced that Navigating the Future will be held on October 31<sup>st</sup> at Shell Martinez. The event is a forum on LNG bunkering, refining, cyber security and safety. Information on the event is posted to the Marine Exchange website.
- Capt. Korwatch advised of an e-navigation conference scheduled for November 6-7 at Cal Maritime. A focus will be on autonomous vessels and information is posted to the Marine Exchange website.

**Old Business- None**

# Harbor Safety Committee

of the San Francisco Bay Region

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

## **New Business-**

- John Berge advised that the five-year EPA Vessel General Permit covering discharges will not be renewed by the end of the year when the current permit is set to expire. Vessels operating under the current permit will be allowed to continue discharging until the permit is renewed.
- Capt. Korwatch advised that there will not be a December HSC meeting.
- Capt. Carr announced that the annual Bar Pilot party will be held on December 13<sup>th</sup> and includes a toy drive as usual.

## **Next Meeting-**

1000-1200, November 8, 2018  
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 11:18.

Respectfully submitted:



Capt. Lynn Korwatch

## SIGNIFICANT PORT SAFETY AND SECURITY CASES (SEPT 2018)

### MARINE CASUALTIES

Loss of propulsion (08SEP18): A U.S. flag vehicle carrier experienced a loss of propulsion at Anchorage 8 while conducting propulsion tests. Technicians identified two air lines had been incorrectly installed, preventing the governor from working as designed. Repairs were made and the propulsion system was tested to Class satisfaction. Case closed.

Loss of propulsion (10SEP18): A U.S. flag small passenger vessel experienced a loss of propulsion while transiting in the San Francisco Bay. The port engine was brought back online and vessel proceeded to berth under power. Loss of propulsion was attributed to a failed alternator. Both alternators were replaced, propulsion was tested to Coast Guard satisfaction. Case closed.

Equipment Failure (12SEP18): A U.S. flag oil recovery vessel experienced a reduction of propulsion while transiting to Richmond. A technician identified the causative factor to be a loose connection within the throttle control. Repair was made and propulsion system was tested to Coast Guard satisfaction. Case closed.

Allision (14SEP18): A U.S. flag towing vessel pushing a crane barge in the San Joaquin river came into contact with 03 PG&E overhead power lines. The crane caught the power lines which fell into the waterway. San Joaquin sheriff and CG Station Rio Vista responded, but the tug was able to free itself. A Safety Marine Information Broadcast was broadcasted immediately and an Emergency Safety Zone was established in support of the emergency response operations. PG&E isolated the lines to effect repairs. Case Closed.

Equipment Failure (17SEP18): A foreign flag tank vessel notified the USCG that the vessel's emergency generator was unable to start automatically as originally designed. The vessel's class society placed a condition of class on the vessel while transiting in navigable waters. A COTP Order was issued requiring the vessel to provide a detailed plan outlining measures to be taken to meet these conditions while transiting in the San Francisco Bay. The COTP Order was lifted upon the vessel's departure from port. Case closed.

### VESSEL SAFETY CONDITIONS

Vessel Detention, (08SEP18): A foreign flag container vessel was detained due to an inoperable emergency generator. Batteries servicing the emergency generator were renewed. Primary and secondary starts were tested to Coast Guard and Class satisfaction. The detention was lifted. Case closed.

### NAVIGATIONAL SAFETY

Letter of Deviation (LOD), (08SEP18): A foreign flag tank vessel was issued an inbound letter of deviation for an inoperable Primary Marine Radar. Radar was repaired and tested with satisfactory results. Case closed.

Letter of Deviation (LOD), (09SEP18): A foreign flag tank vessel was issued an inbound letter of deviation for an inoperable Automatic Identification System (AIS). AIS was repaired and tested with satisfactory results. Case closed.

Letter of Deviation (LOD), (15SEP18): A foreign flag freight vessel was issued an inbound letter of deviation for an inoperable Gyrocompass. Gyrocompass was repaired and tested with satisfactory results. Case closed.

Letter of Deviation (LOD), (18SEP18): A foreign flag tank vessel was issued an outbound letter of deviation for an inoperable Secondary Marine Radar. Secondary Marine Radar was repaired and tested with satisfactory results. Case closed.

Letter of Deviation (LOD), (26SEP18): A foreign flag tank vessel was issued an inbound letter of deviation for an inoperable Secondary Marine Radar. Radar was repaired and tested with satisfactory results. Case closed.

### SIGNIFICANT INCIDENT MANAGEMENT DIVISION CASES

Letter of Warning, (05SEP18): The owner of recreational vessel was removing fuel from his tanks and spilled approximately 1 gallon of diesel into the bilge. The bilge pump kicked on and discharged the diesel into the water at Emeryville Marina. The owner responded and conducted cleanup operations for the spilled diesel. Case closed.

Letter of Warning, (08SEP18): A recreational vessel discharged an unknown amount diesel from their bilge into Moss Landing Harbor. The harbor master responded with boom and owner conducted cleanup operations. Case closed.

Case Pends, (08SEP18): While fueling at the Oakland Marina, a CG vessel spilled approximately 6 gallons of diesel. The crew conducted clean up operations and noted that the diesel fuel line at the marina was leaking into the water. CG IMD personnel responded and had boom placed around the pipe. Due to overall disrepair of the diesel fuel line, an admin order was placed on the marina until the line was fixed. The harbor master replaced part of the pipe, however during a pressure test, the line proved to still be leaking. Additional repairs were made and the fuel dock was temporarily re-opened for 30 days.

Letter of Warning, (18SEP18): A commercial fishing vessel struck a rock near Golden Gate Bridge while transiting out to sea. The owner transited to Stinson Beach where he attempted to beach the vessel. When he was unable to beach the vessel, the owner began to transit through the narrow channel into the lagoon. A local fisherman assisted the owner to ensure he would not grounded himself in the channel. The owner tied the vessel off a seawall. CG IMD personnel arrived on scene and federalized the case in order to remove the threat of pollution from the environmentally sensitive lagoon. The owner later hired a salvage company to tow the vessel out of the lagoon. Case Closed

Letter of Warning, (21SEP18): A commercial fishing vessel discharged approximately 1 gallon of diesel from their bilge. Case closed.

PREVENTION / RESPONSE - SAN FRANCISCO HARBOR SAFETY STATISTICS

September 2018

PORT SAFETY CATEGORIES*	Sep-2018	Sep-2017	**3yr Avg
Total Number of Port State Control Detentions:	1	0	0.39
SOLAS (1), STCW (0), MARPOL (0), ISM (0), ISPS (0)			
Total Number of COTP Orders:	1	2	3.25
Navigation Safety (0), Port Safety & Security (1), ANOA (0)			
Marine Casualties (reportable CG 2692) within SF Bay:	6	10	9.58
Allision (0), Collision (0), Fire (0), Capsize (0), Grounding (1), Sinking (0)			
Steering (0), Propulsion (1), Personnel (2), Other (2), Power (0)			
Total Number of (routine) Navigation Safety issues/Letters of Deviation:	5	2	2.33
Radar (3), Gyro (1), Steering (0), Echo Sounder (0), AIS (1)			
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
<b>Total Port Safety (PS) Cases opened</b>	<b>13</b>	<b>14</b>	<b>16.39</b>
MARINE POLLUTION RESPONSE			
Pollution Discharge Sources (Vessels)	Sep-2018	Sep-2017	**3yr Avg
U.S. Commercial Vessels	0	1	0.67
Foreign Freight Vessels	0	0	0.08
Public Vessels	2	1	0.58
Commercial Fishing Vessels	2	0	0.44
Recreational Vessels	10	2	2.89
Pollution Discharge Sources (Facilities)			
Regulated Waterfront Facilities	0	0	0.08
Regulated Waterfront Facilities - Fuel Transfer	0	0	0.00
Other Land Sources	4	1	1.28
Mystery Spills - Unknown Sources	4	5	3.83
Number of Pollution Incidents within San Francisco Bay			
Spills < 10 gallons	14	5	3.81
Spills 10 - 100 gallons	0	0	0.97
Spills 100 - 1000 gallons	0	0	0.14
Spills > 1000 gallons	0	0	0.00
Spills - Unknown Size	8	5	5.03
<b>Total Pollution Incidents</b>	<b>22</b>	<b>10</b>	<b>9.94</b>
Oil Discharge/Hazardous Materials Release Volumes by Spill Size			
Estimated spill amount from U.S. Commercial Vessels	0.00	0.06	7.45
Estimated spill amount from Foreign Freight Vessels	0.00	0.00	8.50
Estimated spill amount from Public Vessels	6.00	0.25	2.57
Estimated spill amount from Commercial Fishing Vessels	2.00	0.00	7.40
Estimated spill amount from Recreational Vessels	2.00	3.00	20.94
Estimated spill amount from Regulated Waterfront Facilities	0.00	0.00	0.11
Estimated spill amount from Regulated Waterfront Facilities - Fuel Transfer	0.00	0.00	0.00
Estimated spill amount from Other Land Sources	1.00	1.00	10.50
Estimated spill amount from Unknown Sources (Mystery Sheens)	unk	unk	0.00
<b>Total Oil Discharge and/or Hazardous Materials Release (Gallons)</b>	<b>11.00</b>	<b>4.31</b>	<b>57.48</b>
Penalty Actions			
Civil Penalty Cases	0	0	0.00
Notice of Violations	0	0	0.25
Letters of Warning	4	0	2.47
<b>Total Penalty Actions</b>	<b>4</b>	<b>0</b>	<b>2.72</b>

\* 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.

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

**Report of the  
U.S. Army Corps of Engineers, San Francisco District  
October 11, 2018**

**1. CORPS O&M DREDGING PROGRAM**

The following report covers the upcoming FY 2018 dredging program for San Francisco Bay. This program is subject to change based on a number of variables including final FY 2018 appropriations and Corps Work Plan. Please refer to the Local Notice to Mariner for details of dredge operations.

**FY 2018 DREDGING**

- a. **SF Main Ship Channel** – Project is now being executed based on 2 dredging episodes, the first of which was completed by the Essayons on 6/6/18 with the second episode scheduled to start in October 2018 with the West Coast Hopper Contract as dredged by the Stuveysant.
- b. **Richmond Inner Harbor** – FY 18 dredging contract was awarded on 4 September but a protest was received by the District thereby delaying mobilization. Extent of potential delays has not been determined. The protest is being assessed and future updates will address status. **This action is still being worked.**
- c. **Richmond Outer Harbor (and Richmond Long Wharf)** –In alignment with last year’s proposal to alternate Hopper dredging, planned dredging for Richmond Outer will proceed with Essayons. Due to scheduling issue with the West Coast Hopper Contract the Essayons will perform the dredging with two Episodes. The first episode has been completed and the second episode **is underway.**
- d. **Oakland Harbor** – The 2018 dredge cycle is expected to start in September with planned upland disposal through November. Contract has been awarded.
- e. **Redwood City Harbor** – 2018 dredge cycle has been postponed to 2019. With Mob/Demob and limited carryover funds the projected contract was deemed to be less than cost efficient and the decision was made to plan for a larger scale maintenance dredging episode in alignment with the semi-annual cycle.
- f. **San Pablo Bay (Pinole Shoal)** –In alignment with last year’s proposal to alternate Gov’t Hopper dredging Pinole will be deferred in 2018.
- g. **Suisun Bay Channel (and New York Slough)** – **2018 Clamshell cycle has been awarded and dredging is underway**

**2. DEBRIS REMOVAL** – Debris removal for September 2018 was 59.5 tons. Raccoon: 20 tons; Dillard: 28.5 tons; other boats: 11 tons, including 4 abandoned vessels. Average for September from 2008 to 2017 is 34 tons (Range: 8.5-70.5 tons).

**BASEYARD DEBRIS COLLECTION TOTALS:**

<b>MONTH</b>	<b>RACCOON</b>	<b>DILLARD</b>	<b>MISC</b>	<b>TOTAL</b>
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	0	0	0	0
NOV	0	0	0	0
DEC	0	0	0	0

<b>YR TOTAL</b>
727

**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. Funding was allocated in the FY17 work plan. The Tentatively Selected Plan (TSP) milestone for Phase I (Western Reach) of the project was held on 29 June 2016 utilizing FY14 carryover funds. The recommended plan is to deepen the Phase I reach of the project from a depth of -35 feet to -38 feet MLLW. The final report is scheduled to be approved in February 2019. Additional funding was allocated to the project for FY18 and the schedule is being reassessed. The Wilmington team had intended to come out for a series of workshops on the study with stakeholders but preparation and response for Hurricane Florence postponed the workshops.

## 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 Chanel:** 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:** Condition survey of June 14, 2018.  
**Oakland Outer Harbor:** Condition survey of June 15, 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):** Condition survey of August 7, 2018.  
**Richmond Outer Harbor (Southampton Shoal):** Condition survey of August 7, 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:** Condition survey of May 31 & June 1, 2018.  
**Suisun Bay Channel (Bullshead Reach):** Condition survey of April 19, 2017.  
**Suisun Bay Channel (New York Slough):** Condition survey of May 31 & June 1, 2018.

Disposal Site Condition Surveys:

**SF-08 (Main Ship Channel Disposal Site):** Condition survey of May 3, 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 August 28, 2018.

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

**SF-17 (Ocean Beach Disposal Site):** Condition survey of May 4, 2018.

**Requested Surveys:**

Pre/Post-dredge and condition surveys are scheduled to occur thru November for all of San Francisco District's in-bay projects which are planned to be dredged in FY18/FY19.

**NEW WEB ADDRESS – USACE WORK PLAN:**

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

# O&M DREDGING PLAN FOR FY19\*

11-Oct-18

Project	Bid Opening Award Date	FY 2018			FY 2019									FY 2020			Estimated CY	Planned Placement Site	Notes	
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
SF Main Ship Channel	N/A																	350kcy	SF-8	Assumed Essayons
Humboldt Bar & Entrance	N/A																	600kcy	HOODS	Assumed WCH
Pinole Shoal	N/A																	300kcy	SF-11/SF-10	Assumed Essayons
Crescent City	3 Aug/31 Aug																			Award would be predicated on receipt of work plan funds in July
Petaluma	3 Aug/31 Aug																			Award would be predicated on receipt of work plan funds in July
Redwood City Harbor	22 Apr/6 May																	300kcy	SF-11	Advanced maintenance is being considered
Richmond Inner Harbor	7 May/21 May																	350kcy	DODS/upland least cost	IFB
Combined Sac/San Joaquin	22 May/5 June																	350kcy	Various Upland	IFB
Oakland Harbor	20 June/8 July																	750kcy	DODS/upland least cost	IFB
Suisun Bay Channel	9 July/23 July																	175kcy	SF-16	Motco is being assessed as an additional stand alone contract
Richmond Outer Harbor	N/A																			Deferred to FY20

<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: red; border: 1px solid black;"></span> Ongoing Contracts</li> <li><span style="display: inline-block; width: 20px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, red 4px); border: 1px solid black;"></span> New SPN Contract including Mobilization</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; border: 1px solid black;"></span> West Coast Hopper Contract</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: black; border: 1px solid black;"></span> Government Dredge</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: lightgreen; border: 1px solid black;"></span> Environmental Window</li> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid yellow;"></span> Bid Opening</li> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid red;"></span> Contract Award</li> </ul>
---	---

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

Date of Update:

10/10/2018



---

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@sfmx.org](mailto:hsc@sfmx.org)

---

## San Francisco Clearinghouse Report

October 11, 2018

- ✎ In September the clearinghouse did not contact OSPR regarding any possible escort violations.
- ✎ In September 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 September there were 88 tank vessel arrivals; 11 ATBs, 3 Chemical Tankers, 16 Chemical/Oil Tankers, 32 Crude Oil Tankers, 15 Product Tankers, and 11 Tugs with Barges.
- ✎ In September there were 277 total vessel arrivals.

# San Francisco Bay Clearinghouse Report For September 2018

## San Francisco Bay Region Totals

	<u>2018</u>		<u>2017</u>	
Tanker arrivals to San Francisco Bay	66		72	
ATB arrivals	11		13	
Barge arrivals to San Francisco Bay	11		12	
Total Tanker and Barge Arrivals	88		97	
Tank ship movements & escorted barge movements	261		316	
Tank ship movements	163	62.45%	190	60.13%
Escorted tank ship movements	133	50.96%	159	50.32%
Unescorted tank ship movements	30	11.49%	31	9.81%
Tank barge movements	98	37.55%	126	39.87%
Escorted tank barge movements	12	4.60%	19	6.01%
Unescorted tank barge movements	86	32.95%	107	33.86%

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

Escorts reported to OSPR 0 0

<b>Movements by Zone</b>	<b>Zone 1</b>	<b>%</b>	<b>Zone 2</b>	<b>%</b>	<b>Zone 4</b>	<b>%</b>	<b>Zone 6</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total movements	176		254		0		117		547	
Unescorted movements	71	40.34%	113	44.49%	0	0.00%	47	40.17%	231	42.23%
Tank ships	54	30.68%	83	32.68%	0	0.00%	42	35.90%	179	32.72%
Tank barges	17	9.66%	30	11.81%	0	0.00%	5	4.27%	52	9.51%
Escorted movements	105	59.66%	141	55.51%	0	0.00%	70	59.83%	316	57.77%
Tank ships	101	57.39%	129	50.79%	0	0.00%	66	56.41%	296	54.11%
Tank barges	4	2.27%	12	4.72%	0	0.00%	4	3.42%	20	3.66%

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	584		797	
ATB arrivals	92		146	
Barge arrivals to San Francisco Bay	102		150	
Total Tanker and Barge Arrivals	686		1,093	
Tank ship movements & escorted barge movements	2,822		3,562	
Tank ship movements	1,541	54.61%	2,075	58.25%
Escorted tank ship movements	1,221	43.27%	1,618	45.42%
Unescorted tank ship movements	320	11.34%	457	12.83%
Tank barge movements	1,281	45.39%	1,487	41.75%
Escorted tank barge movements	168	5.95%	218	6.12%
Unescorted tank barge movements	1,113	39.44%	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
---	---

<b>Movements by Zone</b>	<b>Zone 1</b>	<b>%</b>	<b>Zone 2</b>	<b>%</b>	<b>Zone 4</b>	<b>%</b>	<b>Zone 6</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total movements	1,759		2,746		0		1,201		5,706	
Unescorted movements	817	46.45%	1,386	50.47%	0	0.00%	543	45.21%	2,746	48.12%
Tank ships	670	38.09%	1,075	39.15%	0	0.00%	494	41.13%	2,239	39.24%
Tank barges	147	8.36%	311	11.33%	0	0.00%	49	4.08%	507	8.89%
Escorted movements	942	53.55%	1,360	49.53%	0	0.00%	658	54.79%	2,960	51.88%
Tank ships	859	48.83%	1,195	43.52%	0	0.00%	602	50.12%	2,656	46.55%
Tank barges	83	4.72%	165	6.01%	0	0.00%	56	4.66%	304	5.33%

### Notes:

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



## CALIFORNIA STATE LANDS COMMISSION

### HARBOR SAFETY COMMITTEE MONTHLY REPORT - SEPTEMBER COMPARISON

#### VESSEL TRANSFERS

	Total Transfers	Total Vessels Monitored	Total Transfers Percentage
SEPTEMBER 1 - 30, 2017	214	74	34.58
SEPTEMBER 1 - 30, 2018	201	88	43.78

#### CRUDE OIL / PRODUCT TOTALS

	Crude Oil ( D )	Crude Oil ( L )	Overall Product ( D )	Overall Product ( L )	GRAND TOTAL
SEPTEMBER 1 - 30, 2017	16,911,000		22,691,745	6,222,839	28,914,584
SEPTEMBER 1 - 30, 2018	15,185,000		19,385,893	6,244,594	25,630,487

#### OIL SPILL TOTAL

	<u>TERMINAL</u>	<u>VESSEL</u>	<u>Total</u>	<u>Gallons Spilled</u> LCO - 25 Gallons
SEPTEMBER 1 - 30, 2017	1	0	1	
SEPTEMBER 1 - 30, 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.

# SAIL GP

## PRACTICE DAYS | 11:00 – 15:00

- Tentatively schedule for Tuesday, April 30th and Friday, May 3<sup>rd</sup>
- Looking to pick 2x dates with lightest traffic
- Could adjust practice racing times slightly and/or stop practice racing when/if needed to let a commercial ship through

## RACE DAYS

- The Race Box should not impact any commercial vessels as there are traffic lanes north, east and west of the course
- There are windows throughout the day when **if absolutely necessary, commercial** vessels could use a restricted traffic lane south of the Race Box along the shore
  - Before the start (11AM-12PM)
  - 5 minutes between Races
  - 15 minutes after the end of Races (2PM)

11:00 - 16:00 Active Race Box

11:18 - 12:13 Dock Out and Crew Training

**12:00 - 14:00 Race Window**

12:13 - 12:33 Fleet Race

*12:33 - 12:49 Break between Race (approx. 16 min)*

12:49 - 13:09 Fleet Race

*13:09 - 13:25 Break between Race (approx. 16 min)*

13:25 - 13:45 Final Race

13:45 - 13:55 Return to Dock



**RACE AREA FOOTPRINT**

**ALCATRAZ ISLAND**

**GOLDEN GATE BRIDGE**

**EAST BOUND TRAFFIC LANE**

**COMMERCIAL TRAFFIC LANE**

**CITY FRONT RACECOURSE**

**WINDWARD LEEWARD LEG - 1.8 NM / COURSE WIDTH - 0.7 NM**

**STARTING AREA**

**START LINE**

**SPECTATOR FLEET**

**SPECTATOR FLEET**

**SPECTATOR FLEET**

**SPECTATOR FLEET**

**SPECTATOR FLEET**

**LEEWARD GATE**

**WINDWARD GATE**

**TURNING MARK**

**NOTE: LENGTH AND AXIS OF THE RACE COURSE ARE INDICATIVE ONLY, EXACT LENGTH AND DIRECTION WILL BE SET BASED ON ACTUAL WIND SPEED AND DIRECTION AT THE TIME.**

**NOTE: RESTRICTED TRAFFIC LANE (DASHED LINE)**

**"FINISH LINE"**

**TRAFFIC LANE**

**FISHMAN'S WHARF**

**PIER 39**

**FERRY DOCKS**

**AQUATIC PARK**

**FORT MASON**

**GAS HOUSE MARINA**

**MARINA GREEN**

**F50 RACE VILLAGE (YACHT CLUB PENINSULA)**

**SF MARINA**

**CRISSY FIELD BEACH**

**CRISSY FIELD**

**CRISSY LAGOON**

**FORT POINT**

**SAN FRANCISCO**

SAN FRANCISCO | APRIL & MAY 2019

ON WATER  
OPERATIONS PLAN

---

**SAIL GP**



---

# INTERNATIONAL

PROFESSIONAL SAILING SERIES

---

- ▶ A new annual sailing league featuring the world's best sailors racing in 50' foiling catamarans.
- ▶ The inaugural season will start in 2019, with six teams and five events in global, iconic cities. the first event would be staged in Sydney Australia.
- ▶ The ambition of the International Sailing Series is to grow to ten events and ten teams by its third year, providing long term stability as a professional sailing series.
- ▶ The San Francisco event would feature two official practice days followed by two race days over a weekend. The races will be scheduled over a two hour broadcast window in the afternoon.

SAUSALITO

ANGEL ISLAND

ALCATRAZ ISLAND

GOLDEN GATE BRIDGE

SPECTATOR AREA

SPECTATOR AREA

SPECTATOR AREA

SPECTATOR AREA

CITY FRONT RACE AREA

01

YACHT CLUB PENINSULA RACE VILLAGE

2

SAN FRANCISCO



PRESIDIO

PIER 30-32

TREASURE ISLAND

TREASURE ISLAND TECHNICAL AREA

03

YERBA BUENA ISLAND

BAY BRIDGE

ALAMEDA ISLAND



02

SAN FRANCISCO  
04-05 MAY

SAILGP



SAN FRANCISCO

# RACE COURSE

---

LOGISTICS & SAFETY



**RACE AREA FOOTPRINT**

**ALCATRAZ ISLAND**

**GOLDEN GATE BRIDGE**

WEST BOUND TRAFFIC LANE

EAST BOUND TRAFFIC LANE

COMMERCIAL TRAFFIC LANE

STARTING AREA  
START LINE

SPECTATOR FLEET

SPECTATOR FLEET

SPECTATOR FLEET

SPECTATOR FLEET

WINDWARD GATE

SPECTATOR FLEET

**CITY FRONT RACECOURSE**  
WINDWARD LEEWARD LEG - 1.8 NM / COURSE WIDTH - 0.7 NM

LEEWARD GATE

SPECTATOR FLEET

NOTE: LENGTH AND AXIS OF THE RACE COURSE ARE INDICATIVE ONLY, EXACT LENGTH AND DIRECTION WILL BE SET BASED ON ACTUAL WIND SPEED AND DIRECTION AT THE TIME.

TURNING MARK

"FINISH LINE"

NOTE: RESTRICTED TRAFFIC LANE (DASHED LINE)

TRAFFIC LANE

PIER 39

FISHERMAN'S WHARF

FERRY DOCKS

AQUATIC PARK

FORT MASON

GAS HOUSE MARINA

SF MARINA  
MARINA GREEN

**F50 RACE VILLAGE**  
(YACHT CLUB PENINSULA)

CRISSY FIELD BEACH

CRISSY LAGOON

CRISSY FIELD

FORT POINT

**SAN FRANCISCO**



**ALCATRAZ ISLAND**

**GOLDEN GATE BRIDGE**

**RACE AREA FOOTPRINT**

WIND TRAIL NE

EAST BOUND TRAFFIC LANE

STARTING AREA

START LINE

SPECTATOR FLEET

SPECTATOR FLEET

**CITY FRONT RACECOURSE**  
WINDWARD LEEWARD LEG - 1.8 NM / COURSE WIDTH - 0.7 NM

LEEWARD GATE

SPECTATOR FLEET

SPECTATOR FLEET

SPECTATOR FLEET

TURNING MARK

NOTE: LENGTH AND AXIS OF THE RACE COURSE ARE INDICATIVE ONLY, EXACT LENGTH AND DIRECTION WILL BE SET BASED ON ACTUAL WIND SPEED AND DIRECTION AT THE TIME.

"FINISH LINE"

NOTE: RESTRICTED TRAFFIC LANE (DASHED LINE)

TRAFFIC LANE

FORT POINT

FISHERMAN'S WHARF

FERRY DOCKS

AQUATIC PARK

CRISSY FIELD

CRISSY LAGOON

CRISSY FIELD BEACH

SF MARINA

MARINA GREEN

GAS HOUSE MARINA

FORT MASON

**F50 RACE VILLAGE (YACHT CLUB PENINSULA)**

**SAN FRANCISCO**

---

# ON WATER IMPACT

TENTATIVE SCHEDULE

11:00 - 15:00 Active Race Box

## PRACTICE DAYS

- ▶ Tentatively schedule for Tuesday, April 30th and Friday, May 3rd
- ▶ Looking to pick 2x dates with lightest traffic
- ▶ Could adjust practice racing times slightly and/or stop practice racing when needed to let a commercial ship through

---

# ON WATER IMPACT

## TENTATIVE SCHEDULE

---

### RACE DAYS

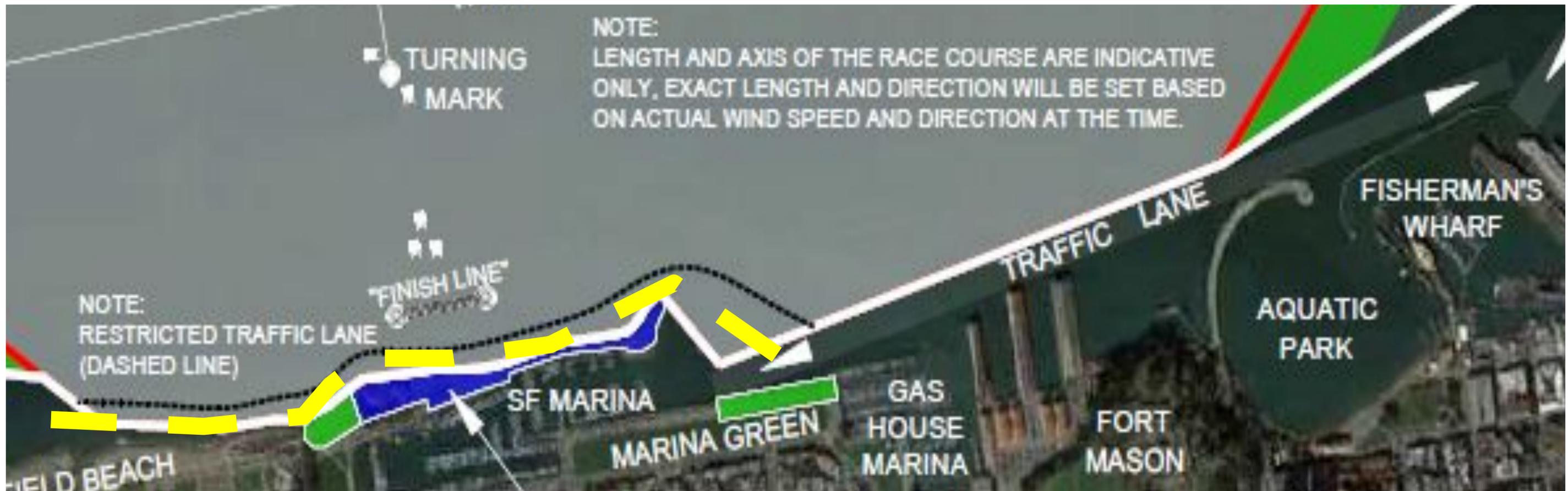
- ▶ The Race Box should not impact any commercial vessels as there are traffic lanes north, east and west of the course.
- ▶ There are windows throughout the day when **if absolutely necessary, commercial** vessels could use a restricted traffic lane south of the Race Box along the shore
  - Before the start (11AM-12PM)
  - 5 minutes between Races
  - 15 minutes after the end of Races (2PM)

11:00 - 16:00	Active Race Box
11:18 - 12:13	Dock Out and Crew Training
<b>12:00 - 14:00</b>	<b>Race Window</b>
12:13 - 12:33	Fleet Race
12:33 - 12:49	<i>Break between Race (approx. 16 min)</i>
12:49 - 13:09	Fleet Race
13:09 - 13:25	<i>Break between Race (approx. 16 min)</i>
13:25 - 13:45	Final Race
13:45 - 13:55	Return to Dock

# ON WATER IMPACT

TENTATIVE SCHEDULE

Restricted traffic lane south of the Race Box along the shore



---

## RACE BOX LOGISTICS

---

- In order to deliver high quality races in a fair, safe, timely and professional manner, **the race course must be set up in a protected race box**, exclusive to the race yachts and a limited number of accredited vessels. The race box will be set up and managed by Race Management (RM).
- The race box will be demarcated by a series of approximately **12 large, orange, inflatable "stake marks"** along the perimeter.
- Only boats with an **official flag are allowed to enter and operate within the race box**. Any vessel that does not have an official flag shall stay outside of the stake marks delineating the race box.
- The **stake marks will be set as early as practical** by the RM course marshals to give public boaters an idea of where they can spectate from; however, the stake marks may need to be repositioned if the course shifts, in which case the course marshal will relocate the spectator fleet accordingly.
- The **race box will be patrolled one hour before** the race broadcast window begins and up to 30 minutes after the conclusion of racing.
- The **Regatta Director, Iain Murray, is in charge running the races**. The Regatta Director designs the race course and his team of mark layers move and set the turning marks as required
- Additionally, the Regatta Director oversees all race box operations, including:
  - TV boats
  - Press boats
  - Guest chasers
  - Umpires
  - VIP areas
  - Safety operations

---

# ON WATER SAFETY

## PLANNING & SUPPORT

---

### SAFETY PRECAUTIONS

- Race Management will be responsible for **authorized vessels and activity within the Race Box.**
- The **USCG and supporting law enforcement agencies will focus on the safety of spectator craft** and mariners outside of the Race Box.
- **UHF Radio** communication with all Race Yachts and Support Boats
- Monitoring relevant Marine VHF channels (transit/ferries/harbour & Emergency)
- Event Control Room on shore to monitor all on water operations with broadcast footage, Race box and assets map, radio communications with all on water assets (during practice sailing as a single point of contact and during race days)
- Agencies invited to provide liaison officers during racing and to attend a readiness Exercise to provide assurance and testing approx 4 days out from the event
- On Water Safety Manager for planning and liaison
- All On Water Spectators (OWS) will be registered and Sail GP will be in direct communication throughout planning and race days

---

# ON WATER SAFETY

## PLANNING & SUPPORT

---

### SUPPORT BOATS

- Team Support Boats (6) - includes EMT & Diver per boat
- Rescue Boat (1) - Command Center in case of incident
- Local Safety Boats (2) - for Spectator Zones
- Mark Boats (3)
- Race Course Marshals (15)
- Race Committee Boat (1)
- Umpire (1)
- Medical Response Boat (1)
- Guest Chaser (3)
- Press/Media Boats (4)

# MEDICAL PLAN



## WATER ASSETS

- ◆ Team Support Boats (6)
- ◆ Mark Boats (3)
- ◆ Stake Boats (12)
- ◆ Race Course Marshals (15)
- ◆ Race Committee Boat (1)
- ◆ Umpire (1)
- ◆ Medical Response Boat (1)



## EXTRACTION POINT

- ◆ To be confirmed – Gas House Cove Marina



## GROUND CONTROL

- ◆ Ambulances and medical teams TBD provider



## HOSPITALS

- ◆ San Francisco General
- ◆ UCSF Medical Center
- ◆ California Pacific Medical Center
- ◆ Kaiser



## INCIDENT TRACKING

- ◆ Incident Reports
  - League will provide Event Control Services including radio communications, event control room and incident report tracking.

TREASURE ISLAND

# TECHNICAL BASE

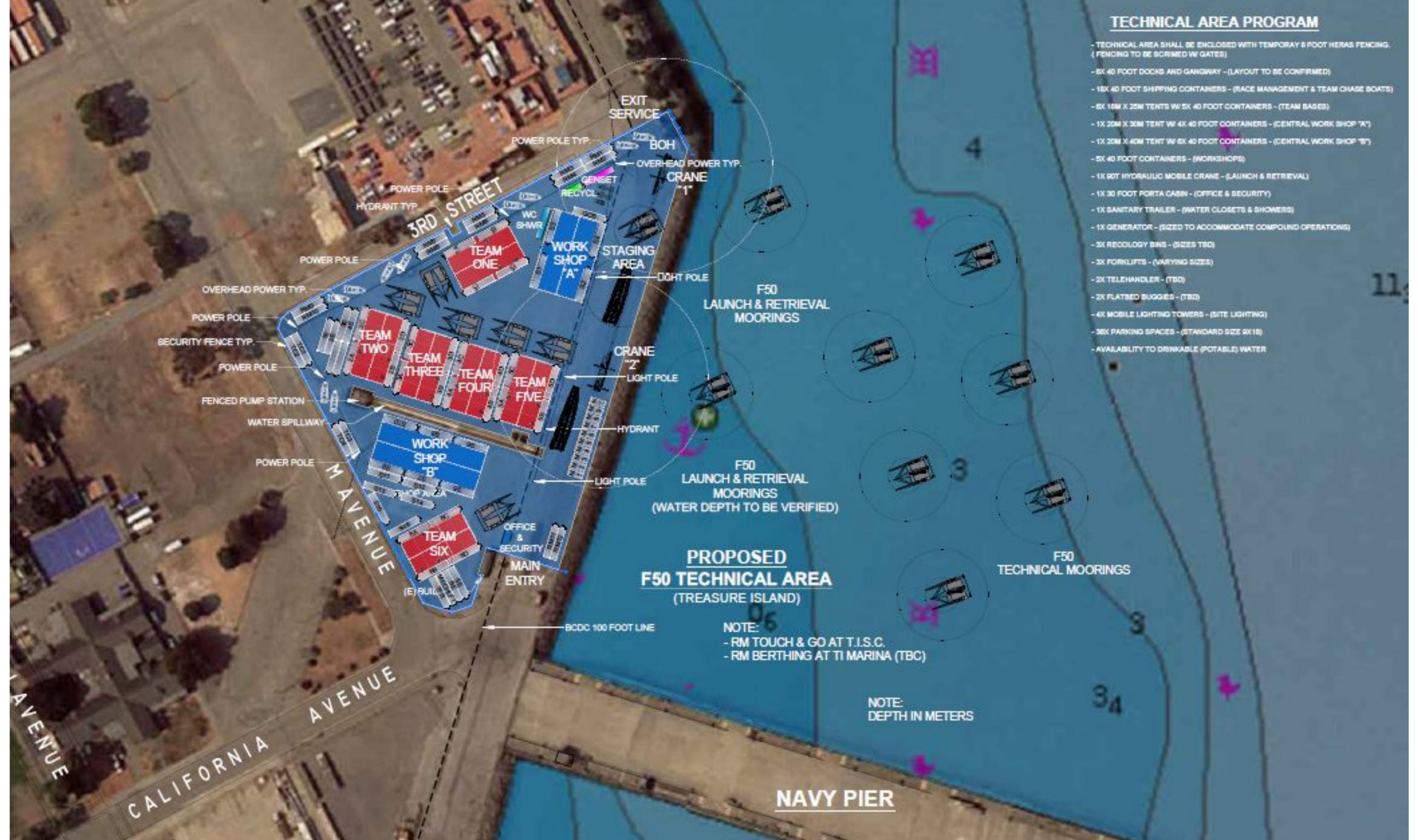
---

RACE YACHT STAGING LOCATION



# TECHNICAL AREA PROGRAM

- TECHNICAL AREA SHALL BE ENCLOSED WITH TEMPORARY 8 FOOT HERAS FENCING (FENCING TO BE SCORMED W/ GATES)
- 6X 40 FOOT DOCKS AND GANGWAY - (LAYOUT TO BE CONFIRMED)
- 18X 40 FOOT SHIPPING CONTAINERS - (RACE MANAGEMENT & TEAM CHASE BOATS)
- 6X 18M X 25M TENTS W/ 5X 40 FOOT CONTAINERS - (TEAM BASES)
- 1X 20M X 30M TENT W/ 4X 40 FOOT CONTAINERS - (CENTRAL WORK SHOP 'A')
- 1X 20M X 40M TENT W/ 6X 40 FOOT CONTAINERS - (CENTRAL WORK SHOP 'B')
- 5X 40 FOOT CONTAINERS - (WORKSHOPS)
- 1X 90T HYDRAULIC MOBILE CRANE - (LAUNCH & RETRIEVAL)
- 1X 30 FOOT PORTA CABIN - (OFFICE & SECURITY)
- 1X SANITARY TRAILER - (WATER CLOSETS & SHOWERS)
- 1X GENERATOR - (SIZED TO ACCOMMODATE COMPOUND OPERATIONS)
- 3X RECOLOGY BINS - (SIZES TBD)
- 3X FORKLIFTS - (VARYING SIZES)
- 2X TELEHANDLER - (TBD)
- 2X FLATBED BUGGIES - (TBD)
- 4X MOBILE LIGHTING TOWERS - (SITE LIGHTING)
- 30X PARKING SPACES - (STANDARD SIZE 9X18)
- AVAILABILITY TO DRINKABLE (POTABLE) WATER



## PROPOSED F50 TECHNICAL AREA (TREASURE ISLAND)

NOTE:  
 - RM TOUCH & GO AT T.I.S.C.  
 - RM BERTHING AT TI MARINA (TBC)

NOTE:  
 DEPTH IN METERS

---

## RACE YACHT STAGING

---

- ▶ Timeline: **April 1<sup>st</sup> – May 15<sup>th</sup>**
- ▶ Treasure Island will host the Tech Area where the yachts are assembled
- ▶ The six competing teams and Race Management operation teams will be setup in this Tech Area
- ▶ The area will include a crane to drop and host the boats in and out of the water.



TREASURE ISLAND & SF MARINA

# MOORINGS

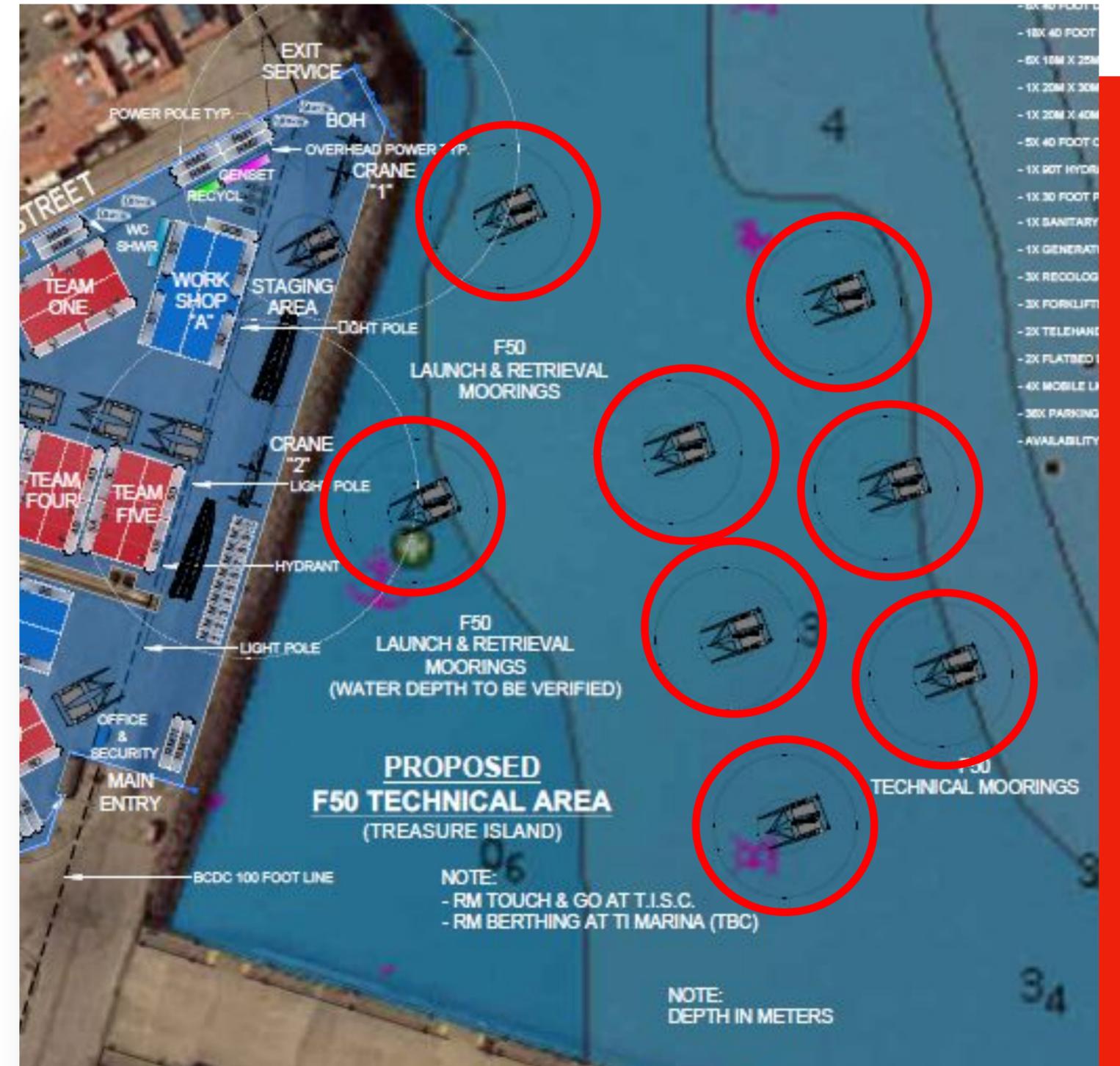
---

TEAM MOORING LOCATIONS

# TREASURE ISLAND MOORINGS

▶ Timeline: April 1<sup>st</sup> – May 15<sup>th</sup>

▶ Total Moorings: 8



# SF MARINA MOORINGS

- ▶ Timeline: **May 1<sup>st</sup> – May 6<sup>th</sup>**
- ▶ Total Moorings: **7**



---

## F50 MOORING SPECIFICATIONS

- AC50 Drogue - Conical 1500lt:
- Dimensions - Base Dia 1.5m x Top Dia 0.3m x Height 2.0m
- Capacity - 1,500lt
- Fabric - Heavy duty 40oz Polyurethane (orange)
- Details
  - 1 x inflation/deflation valve
  - 1 x 50mm fill/discharge fitting with cap
  - 2 x reinforcing for S/S load plates
  - 2 x 10mm S/S plates c/w 16mm D & internal webbing strop SWL 4000kg





THANK YOU

---