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.

Alan Steinbrugge (A), Marine Exchange, confirmed the presence of a quorum of the HSC.

Committee members (M) and alternates (A) in attendance with a vote: John Berge (M), Pacific Merchant Shipping Association; Capt. Tony Ceraolo (M), United States Coast Guard; Chad Culberston (M), Chevron Shipping Company; Kevin Donnelly (M), Water Emergency Transport Authority; Lilli Ferguson (A), NOAA; Aaron Golbus (M), Port of San Francisco; Bob Gregory (M), Foss Maritime Company; Scott Grindy (A), San Francisco Marine Small Craft Harbor; Benjamin Huber (M), Westar Marine Services; MJR Kevin McCormick (A), US Army Corps of Engineers; Jim McGrath (M), Bay Conservation and Development Commission; Griffin Patrick (M), Tesoro Refining and Marketing; Jeff Robbins (M), General Steamship Corp; Capt. Paul Ruff (A), San Francisco Bar Pilots; Capt. Ray Shipway (M), International Organization of Masters, Mates, and Pilots; Jeff Vine (A), Port of Stockton.

The meetings are always open to the public.

Approval of the Minutes-

A motion to accept the minutes of January 12, 2017 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

- Advised that recent weather conditions have resulted in the highest delta water levels recorded in almost a decade. VTS has received updates from the Bar Pilots regarding levee, Aids to Navigation and debris conditions. Storms have caused the Pilots to impose daylight
restrictions and suspend operations for 24 hours in one instance. There has been storm damage to several Aids to Navigation. Heed Local Notice to Mariners and report any issues to the USCG.

- Advised that the USCG is still working with PG&E on the Sacramento power lines issue. Plans to address the problem should be presented by April, 2017.
- Advised that the USCG has published updated policy regarding the reporting of suspicious activity and breaches in security. (CG-5P Policy Letter No. 08-16, 12/14/2016) This policy letter addresses cybersecurity reporting.
- Thanked Capt. Korwatch for chairing the Maritime Transportation System Response and Recovery Coalition meeting scheduled to take place directly after today’s HSC meeting.
- Cmdr. Jen Stockwell read from the January-2017 Prevention/Response Report (attached). The USCG is seeking comment on the proposed decommissioning of the Mile Rocks sound signal. An anchor waiver for the Bay Bridge is proposed for Caltrans maintenance work. See the Local Notice to Mariners for more information.

**Army Corps of Engineers Report- Major Kevin McCormick**

- Al Paniccia read from the US Army Corps of Engineers, San Francisco District Report (attached). Plans for the FY 2017 dredge season were reviewed. The Main Ship Channel and Pinole Shoal Channel will be dredged by government hopper. Suisun Bay Channel will be dredged by clamshell in August. Richmond Outer Harbor dredging is being deferred this season due to CA Water Board restrictions on hopper dredging for longfin smelt protection. Army Corps fiscal policies prevent the use of clamshell dredging in the Richmond Outer Harbor. Condition surveys will be conducted regularly.
- Jim McGrath voiced concern with the Corps’ position regarding longfin smelt, a state protected species.
- Al Paniccia advised that recent storms have led to the increased debris removal numbers reported. The next Suisun Bay condition survey will be conducted on February 13th.

**San Francisco Fire Department Marine Unit - Tsunami Preparedness**

- Aaron Golbus advised of a recent San Francisco Maritime Tsunami Workshop focusing on preparedness and introduced representatives from the San Francisco Fire Department Marine Unit. The Marine Unit seeks to protect fire assets from a tsunami by having plans in place for vessels to leave dock on short notice to ride out the event. Due to the fact that there are more
Fire Department vessels to save than in-house pilots always available, the Marine Unit is looking for a pilot organization to partner with who can provide seasoned pilots on short notice during an emergency situation. The adverse conditions expected during a tsunami event require experienced pilots to operate the vessels. Any help the HSC can provide is appreciated. Capt. Korwatch advised that the HSC will assist on this matter. Capt. Shipway advised that ferry companies face similar problems protecting their vessels and that crew access during an emergency is a primary concern.

Clearing House Report- Alan Steinbrugge (report attached)

OSPR Report- David Mighetto

- Announced that OSPR is accepting applications for the primary or alternate member position on the SF HSC representing Ferry Operations. Deadline to apply is February 28, 2017
- Announced that the California Maritime Leadership Symposium will be held on February 15-16, 2017 in Sacramento. Register for the event online at maritimesymposium.com.
- Advised that the San Francisco Marine Exchange has submitted their proposed 2017-2018 PORTS budget.
- Tom Cullen, OSPR Administrator, advised that SB 414 assessments from other HSC’s are being reviewed. SF HSC’s assessment is still being finalized. OSPR inland regulations are being updated. An audit of OSPR was recently performed showing improvement compared to the last audit in 2012.
- Tom Cullen advised of a meeting that took place yesterday at State Lands regarding derelict vessels. It is cheaper to prevent rather than respond to derelict vessels as show by the Spirit of Sacramento recovery which cost 2–3 million dollars. The issue is being studied with surveys of derelict vessels planned. Larger vessels pose a greater risk that smaller recreational vessels.
- Tom Cullen announced that OSPR is hosting their bi-annual Spill Technology Workshop at the end of March, 2017.

NOAA Report- Lily Ferguson

- Advised that NOAA Fisheries is offering WhaleWatch which estimates the location and density of blue whales offshore. A free webinar will be held on February 22, 2017 from 10:00 – 11:00 regarding the service. Monthly predictive maps are produced to help reduce the risk of ship strikes.
Harbor Safety Committee of the San Francisco Bay Region

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

- Advised that the NWS La Nina watch has been canceled and more rain is expected this season. California reservoirs and snow pack are above normal but large aquifers in the central valley will take more than one wet year to replenish after the drought. See climate.gov ENSO blog for more information.

- Advised that a recent survey of the San Francisco waterfront has been applied to NOAA charts.

State Lands Commission Report - Richard Hernandez (report attached)

Brief on California ARB At-berth Regulations – California Air Resources Board

- Paul Milkey, ARB, gave a presentation to the HSC on proposed fuel regulations for ships at berth (slides attached).
  - CARB regulations have gradually decreased the sulfur limit in fuel which is now at 0.1%. Federal ECA regulations also limit sulfur to 0.1% although there are significant differences between the state and federal laws. CARB provides a straightforward equivalency process for vessels that meet ECA requirements calling California ports. CARB regulations will be removed if it is determined that federal regulations are fully equivalent at reducing sulfur emissions.
  - Effective since 2009, CA at-berth regulations gradually reduce the allowable quantity of PM and NOx emissions for many vessels including container ships, cruise ships and larger fleets. Tankers are not currently included and the regulations only apply to LA/LGB and SF ports. At-berth emission reduction options for vessels include the using of shore power primarily or the use of alternative technologies such as barge based scrubbers. The regulations are in the process of being amended and many methods for reducing emissions are being considered. The inclusion of tankers, bulkers and other vessel types is proposed along with adding regulation of boiler emissions. An ARB workshop will be held regarding this issue in spring, 2017 and input from the HSC and maritime community is welcome. Tankers produce more emissions at-berth that other types of vessels due to their boiler use and lack of current regulations. Amendments focused on reducing tanker emissions by using shore power, booster pumps and barge based emission control systems are being considered. Significant reduction in PM and NOx has been achieved by the existing regulations.
Work Group Reports-

Tug Work Group- Bob Gregory advised that a draft of the SB 414 assessment is being reviewed by the Work Group and should be finalized by the next HSC meeting.


Ferry Operations Work Group- Kevin Donnelly advised that there have been some cancellations and service disruption due to recent storms. Debris has been a significant issue with several ferries requiring prop replacement. A new 400 passenger ferry boat, the M/V Hydrus, will be added to the fleet next week with more new boats on the way. Construction is underway on the new Central Bay Maintenance and Operations Center in Alameda. WETA ridership is up 5% over last year. A Work Group meeting was held on January 19th regarding the routes of smaller ferry outfits on the bay. The smaller ferries will operate outside of high speed ferry lanes. Aaron Golbus advised that construction on San Francisco Ferry Terminal upgrades has been moved up and may start next month.

Dredge Issues Work Group- Chad Culbertson announced that a Work Group meeting will be held directly after today’s HSC meeting to discuss hopper dredging issues.

PORTS Work Group- Nothing to report.

Prevention through People Work Group- Nothing to report.

PORTS Report- Alan Steinbrugge

- Advised of a recent outage affecting the Pier 1 weather station.
- Advised of communication issues with the Oakland Inner Harbor buoy mounted current sensor.
- Advised that planning continues with the Port of San Francisco regarding a Pier 27 weather station. Capt. Korwatch advised that a Pier 27 current sensor has been requested and will be considered.

Public Comment-

- Jim Haussener, CMANC, advised that the FY 2008 dredging request has been prepared. Most of the requests made in the past have received funding. A support letter from the Dredge Work
Group is being prepared for submission at the next HSC meeting. Jim McGrath advised that the Bay Planning Coalition has been working on these issues as well.

- Gordon Loebl, Hornblower, advised of a National Transportation Safety Board report regarding the increase in human powered watercraft purchases and the impact on waterway safety.
- Scott Grindy advised that the South San Francisco Oyster Point development is considering removing the boat ramp there. This ramp is heavily used by the USCG and other agencies and is the only ramp in the area. Jim McGrath recommended that a letter detailing the concerns be sent to BCDC.

Old Business- None

New Business- None

- Capt. Korwatch advised the Maritime Transportation System Response and Recovery Coalition will meet after today’s HSC meeting.

Next Meeting-

1000-1200
February 9, 2017
Port of Oakland
2nd Floor Board Room
530 Water Street
Oakland, CA

Adjournment-

A motion to adjourn was made and seconded. The motion passed without dissent and the meeting adjourned at 11:41.

Respectfully submitted:

Capt. Lynn Korwatch
## Prevention / Response - San Francisco Harbor Safety Statistics

### January 2017

#### Port Safety Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Jan-2017</th>
<th>Jan-2016</th>
<th><strong>3yr Avg</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Port State Control Detentions:</td>
<td>0</td>
<td>2</td>
<td>0.78</td>
</tr>
<tr>
<td>SOLAS (0), STCW (0), MARPOL (0), ISM (0), ISPS (0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Number of COTP Orders:</td>
<td>1</td>
<td>6</td>
<td>4.17</td>
</tr>
<tr>
<td>Navigation Safety (1), Port Safety &amp; Security (0), ANOA (0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marine Casualties (reportable CG 2692) within SF Bay:</td>
<td>7</td>
<td>15</td>
<td>10.28</td>
</tr>
<tr>
<td>Allision (0), Collision (0), Fire (0), Capsize (0), Grounding (0), Sinking (0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steering (1), Propulsion (3), Personnel (0), Other (3), Power (0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Number of (routine) Navigation Safety issues/Letters of Deviation:</td>
<td>5</td>
<td>1</td>
<td>4.06</td>
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<tr>
<td>Radar (2), Gyro (1), Steering (0), Echo Sounder (0), AIS (2)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>AIS-835 (0), ARPA (0), Speed Log (0), R.C. (0), Other (0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reported or Verified &quot;Rule 9&quot; or other Navigational Rule Violations:</td>
<td>0</td>
<td>0</td>
<td>0.50</td>
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<tr>
<td>Significant Waterway events/Navigation related Cases:</td>
<td>0</td>
<td>1</td>
<td>0.33</td>
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<tr>
<td>Total Port Safety (PS) Cases opened</td>
<td>13</td>
<td>25</td>
<td>20.11</td>
</tr>
</tbody>
</table>

#### Marine Pollution Response

<table>
<thead>
<tr>
<th>Pollution Discharge Sources (Vessels)</th>
<th>Jan-2017</th>
<th>Jan-2016</th>
<th><strong>3yr Avg</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Commercial Vessels</td>
<td>1</td>
<td>0</td>
<td>0.81</td>
</tr>
<tr>
<td>Foreign Freight Vessels</td>
<td>0</td>
<td>0</td>
<td>0.11</td>
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<tr>
<td>Public Vessels</td>
<td>0</td>
<td>0</td>
<td>0.53</td>
</tr>
<tr>
<td>Commercial Fishing Vessels</td>
<td>0</td>
<td>0</td>
<td>0.42</td>
</tr>
<tr>
<td>Recreational Vessels</td>
<td>1</td>
<td>1</td>
<td>3.94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollution Discharge Sources (Facilities)</th>
<th>Jan-2017</th>
<th>Jan-2016</th>
<th><strong>3yr Avg</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated Waterfront Facilities</td>
<td>1</td>
<td>0</td>
<td>0.28</td>
</tr>
<tr>
<td>Regulated Waterfront Facilities - Fuel Transfer</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Other Land Sources</td>
<td>0</td>
<td>0</td>
<td>1.36</td>
</tr>
<tr>
<td>Mystery Spills - Unknown Sources</td>
<td>4</td>
<td>3</td>
<td>4.53</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Number of Pollution Incidents within San Francisco Bay</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spills &lt; 10 gallons</td>
<td>2</td>
<td>0</td>
<td>4.83</td>
</tr>
<tr>
<td>Spills 10 - 100 gallons</td>
<td>2</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>Spills 100 - 1000 gallons</td>
<td>0</td>
<td>0</td>
<td>0.22</td>
</tr>
<tr>
<td>Spills &gt; 1000 gallons</td>
<td>0</td>
<td>0</td>
<td>0.06</td>
</tr>
<tr>
<td>Spills - Unknown Size</td>
<td>3</td>
<td>3</td>
<td>5.72</td>
</tr>
</tbody>
</table>

| Total Pollution Incidents                                              | 7        | 4        | 12.08       |

<table>
<thead>
<tr>
<th>Oil Discharge/Hazardous Materials Release Volumes by Spill Size</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated spill amount from U.S. Commercial Vessels</td>
<td>30.00</td>
<td>0.00</td>
<td>14.22</td>
</tr>
<tr>
<td>Estimated spill amount from Foreign Freight Vessels</td>
<td>0.00</td>
<td>0.00</td>
<td>8.42</td>
</tr>
<tr>
<td>Estimated spill amount from Public Vessels</td>
<td>0.00</td>
<td>0.00</td>
<td>1.40</td>
</tr>
<tr>
<td>Estimated spill amount from Commercial Fishing Vessels</td>
<td>0.00</td>
<td>0.00</td>
<td>9.93</td>
</tr>
<tr>
<td>Estimated spill amount from Recreational Vessels</td>
<td>10.00</td>
<td>1.00</td>
<td>41.70</td>
</tr>
<tr>
<td>Estimated spill amount from Regulated Waterfront Facilities</td>
<td>1.00</td>
<td>0.00</td>
<td>3.03</td>
</tr>
<tr>
<td>Estimated spill amount from Regulated Waterfront Facilities - Fuel Transfer</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Estimated spill amount from Other Land Sources</td>
<td>0.00</td>
<td>0.00</td>
<td>31.89</td>
</tr>
<tr>
<td>Estimated spill amount from Unknown Sources (Mystery Sheens)</td>
<td>unk</td>
<td>unk</td>
<td>0.92</td>
</tr>
<tr>
<td>Total Oil Discharge and/or Hazardous Materials Release (Gallons)</td>
<td>41.00</td>
<td>1.00</td>
<td>111.50</td>
</tr>
</tbody>
</table>

#### Penalty Actions

<table>
<thead>
<tr>
<th>Category</th>
<th>Jan-2017</th>
<th>Jan-2016</th>
<th><strong>3yr Avg</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil Penalty Cases</td>
<td>0</td>
<td>0</td>
<td>0.11</td>
</tr>
<tr>
<td>Notice of Violations</td>
<td>0</td>
<td>1</td>
<td>0.64</td>
</tr>
<tr>
<td>Letters of Warning</td>
<td>3</td>
<td>0</td>
<td>3.14</td>
</tr>
</tbody>
</table>

| Total Penalty Actions     | 3        | 1        | 3.89        |

*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 (Jan 2017)

#### MARINE CASUALTIES

<table>
<thead>
<tr>
<th>MARINE CASUALTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steering Casualty (04JAN17):</strong></td>
</tr>
<tr>
<td>A U.S. flag passenger vessel experienced a loss of starboard steering while underway without passengers onboard. Vessel moored using port steering and affected repairs. Case Closed.</td>
</tr>
<tr>
<td><strong>Loss of Propulsion (09JAN17):</strong></td>
</tr>
<tr>
<td>A U.S. flag passenger vessel experienced a loss of propulsion on the number 2 engine while underway conducting sea trials with no passengers on board. The vessel returned to pier and conducted repairs. Case Pends.</td>
</tr>
<tr>
<td><strong>Loss of Propulsion (27JAN17):</strong></td>
</tr>
<tr>
<td>A foreign flag bulk freight vessel experienced a loss of propulsion while departing anchorage. A COTP Order was issued requiring a two tug escort back to Anchorage 9 and to provide a Class Society report identifying causative factors and attesting to proper operation of main propulsion system. Two COTP Order Amendements were granted allowing vessel to go to berth and then return to Anchorage 9 with a one tug escort while waiting on parts to be delivered. LOP was not attributed to fuel switching. Case Pends.</td>
</tr>
</tbody>
</table>

#### VESSEL SAFETY CONDITIONS

<table>
<thead>
<tr>
<th>VESSEL SAFETY CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NSTR</strong></td>
</tr>
<tr>
<td><strong>GENERAL SAFETY CASES</strong></td>
</tr>
<tr>
<td><strong>Notice of Arrival Violation (11JAN17):</strong></td>
</tr>
<tr>
<td>A foreign bulk freight vessel was issued a Letter of Warning for failure to report required information on the Notice of Arrival (non-functioning navigation equipment). The missing information was discovered while a Port State Control examination team was onboard to conducting a Safety and Security exam.</td>
</tr>
<tr>
<td><strong>NAVIGATIONAL SAFETY</strong></td>
</tr>
<tr>
<td><strong>Letter of Deviation (LOD), Inop AIS (11JAN17):</strong></td>
</tr>
<tr>
<td>Vsl issued an outbound LOD due to parts being delivered at next port of call.</td>
</tr>
<tr>
<td><strong>Letter of Deviation (LOD), Inop Secondary Marine Radar (11JAN17):</strong></td>
</tr>
<tr>
<td>Vsl issued a transit LOD issued; repairs conducted prior to departure.</td>
</tr>
<tr>
<td><strong>Letter of Deviation (LOD), Inop Gyrocompass (12JAN17):</strong></td>
</tr>
<tr>
<td>Vsl issued an outbound LOD, parts to be delivered at next port of call.</td>
</tr>
<tr>
<td><strong>Letter of Deviation (LOD), Inop AIS Pilot Plug (19JAN17):</strong></td>
</tr>
<tr>
<td>Vsl issued an outbound LOD, parts to be delivered at next port of call.</td>
</tr>
<tr>
<td><strong>Letter of Deviation (LOD), Inop S- Band Radar (26JAN17):</strong></td>
</tr>
<tr>
<td>Vsl issued a transit LOD to affect repairs at Anchorage 9; repairs conducted, LOD lifted.</td>
</tr>
</tbody>
</table>

#### SIGNIFICANT INCIDENT MANAGEMENT DIVISION CASES

<table>
<thead>
<tr>
<th>SIGNIFICANT INCIDENT MANAGEMENT DIVISION CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter of Warning (13JAN17):</strong></td>
</tr>
<tr>
<td>Commercial, uninspected deck barge experienced a mechanical casualty and discharged 100 gal hydraulic oil on deck, with approximately 30 gal reaching the water. Spill was contained and promptly recovered by crew onboard the barge.</td>
</tr>
</tbody>
</table>
1. **CORPS O&M DREDGING PROGRAM**

The following report covers the upcoming FY 2017 dredging program for San Francisco Bay. This program is subject to change based on a number of variables including final FY 2017 appropriations and Corps Work Plan. Please refer to the Local Notice to Mariner for details of dredge operations.

**FY 2017 DREDGING**

a. **SF Main Ship Channel** – Estimated start mid-May 2017, estimated completion end of May 2017, by government hopper.

b. **Richmond Inner Harbor** – Estimated start late June 2017, estimated completion end of October 2017, by contracted clamshell.

c. **Richmond Outer Harbor (and Richmond Long Wharf)** – Deferred due to special conditions contained in the Water Quality Certification.


e. **Redwood City Harbor** – Estimated start late June 2017, estimated completion end of October 2017, by contracted clamshell.


g. **Suisun Bay Channel (and New York Slough)** – Estimated start early August 2017, estimated completion end of September 2017, by contracted clamshell.
2. DEBRIS REMOVAL – Debris removal for January 2017 was 417 tons. Dillard: 212 tons; Raccoon: 35 tons; other boats: 170 tons, including Spirit of Sacramento and 3 other abandoned vessels. Average for January from 2007 to 2016 is 87.2 tons. (Range: 35-230 tons).

BASEYARD DEBRIS COLLECTION TOTALS:

<table>
<thead>
<tr>
<th>MONTH</th>
<th>RACCOON</th>
<th>DILLARD</th>
<th>MISC</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JAN</td>
<td>30</td>
<td>212</td>
<td>170</td>
<td>417</td>
</tr>
<tr>
<td>FEB</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MAR</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>DEC</td>
<td>0</td>
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</tr>
</tbody>
</table>

YR TOTAL 417

3. UNDERWAY OR UPCOMING HARBOR IMPROVEMENTS

None to report.

4. EMERGENCY (URGENT & COMPELLING) DREDGING

No urgent dredging in 2017.

5. OTHER WORK
San Francisco Bay to Stockton – No funds were received in FY15 and FY16. However, 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.

HYDROGRAPHIC SURVEY UPDATE

Address of Corps’ web site for completed hydrographic surveys:


The following surveys are posted:

Alameda Point Navigation Channel: Condition survey of November 2, 2016.
Islais Creek Channel: Condition survey of May 12, 2016.
Larkspur Ferry Channel: Condition survey of November 14, 2014.
Main Ship Channel: Post-dredge survey of June 6, 2016.
Mare Island Strait: Condition survey of September 24, 2014.
Marinship Channel (Richardson Bay): Condition survey of December 6, 2016.
Oakland Entrance Channel: Post-dredge survey of September 28 & 30 and October 10, 2016.
Oakland Inner Harbor (Reach 3-6): Post-dredge survey of November 7, 2016.
Oakland Outer Harbor (Reach 7-8): Post-dredge survey of September 10 & 12, 2016.
Oakland Outer Harbor (Reach 9-10): Post-dredge survey of November 11 & December 12, 2016.
Petaluma River (Main Channel): Condition survey of September 13-14, 2014.
Redwood City Harbor: Post-dredge survey of October 28, November 7 and December 9 &13, 2016.
Richmond Inner Harbor (Santa Fe Channel): Condition survey of December 20, 2016.
San Leandro Marina (and Channel): Condition survey of March 30 and April 1, 2015.
San Rafael (Creek): Condition survey of May 9, 2013.
Suisun Bay Channel: Condition survey of December 19, 2016.
Suisun Bay Channel (Bullshead Reach): Condition survey of December 19, 2016.
Suisun Bay Channel (New York Slough): Condition survey of August 16-17, 2016.
Disposal Site Condition Surveys:

SF-08 (Main Ship Channel Disposal Site): Condition survey of March 12, 2013
SF-09 (Carquinez): Condition survey of March 2, 2015.
SF-10 (San Pablo Bay): Condition survey of March 2, 2015.
SF-16 (Suisun Bay Disposal Site): Condition survey of September 1, 2016.
SF-17 (Ocean Beach Disposal Site): Condition survey of March 20, 2013.

Requested Surveys:

Condition surveys are scheduled to occur between now and the end of March for all of San Francisco District’s in-bay projects which are planned to be dredged in FY17.

NEW WEB ADDRESS – USACE WORK PLAN:

http://www.usace.army.mil/Missions/Civil-Works/Budget/
## O&M DREDGING PLAN FOR FY17*

<table>
<thead>
<tr>
<th>Project</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>Volume</th>
<th>Placement Site</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humboldt Bar &amp; Entrance</td>
<td></td>
<td></td>
<td>750kcy</td>
<td>HOODS</td>
<td>WCH Contract</td>
</tr>
<tr>
<td>Noyo Harbor</td>
<td></td>
<td></td>
<td>15kcy</td>
<td>Upland</td>
<td></td>
</tr>
<tr>
<td>Bodega Bay</td>
<td></td>
<td></td>
<td>75kcy</td>
<td>SF-DODS</td>
<td>Clamshell</td>
</tr>
<tr>
<td>SF Main Ship Channel</td>
<td></td>
<td>ESSAYONS</td>
<td>350kcy</td>
<td>OBDS/ SF-8</td>
<td>Gov't Hopper</td>
</tr>
<tr>
<td>Richmond Inner Harbor</td>
<td>**</td>
<td></td>
<td>350kcy</td>
<td>SF-DODS</td>
<td>Clamshell</td>
</tr>
<tr>
<td>Richmond Outer Harbor</td>
<td></td>
<td></td>
<td>250kcy</td>
<td>SF-11</td>
<td>Deferred</td>
</tr>
<tr>
<td>Oakland Harbor</td>
<td>**</td>
<td></td>
<td>600kcy</td>
<td>SF-DODS</td>
<td>Clamshell, Option to (E) Contract</td>
</tr>
<tr>
<td>Redwood City Harbor</td>
<td>**</td>
<td></td>
<td>350kcy</td>
<td>SF-11</td>
<td>Clamshell</td>
</tr>
<tr>
<td>Pinole Shoal</td>
<td>ESSAYONS</td>
<td>ESSAYONS</td>
<td>150kcy</td>
<td>SF-10</td>
<td>Gov't Hopper</td>
</tr>
<tr>
<td>Suisun Bay Channel</td>
<td></td>
<td></td>
<td>175kcy</td>
<td>SF-16</td>
<td></td>
</tr>
<tr>
<td>Napa River</td>
<td>**</td>
<td></td>
<td>90kcy</td>
<td>Upland</td>
<td></td>
</tr>
<tr>
<td>Sacramento River (30 Ft)</td>
<td></td>
<td></td>
<td>100kcy</td>
<td>Various Upland</td>
<td>Clamshell</td>
</tr>
<tr>
<td>San Joaquin, Port of Stockton</td>
<td>**</td>
<td></td>
<td>300kcy</td>
<td>Various Upland</td>
<td>Pipeline</td>
</tr>
</tbody>
</table>

### Abbreviations:
- **Ongoing Contract**
- **New Contract**
- **WCH Contract**
- **Gov't Dredge**
- **Environmental Window**
- WCH - West Coast Hopper

* Program execution is based on the FY17 President's Budget and Federal Standard plan for each project. Updated: 2/9/2017

** Window Extension.
San Francisco Clearinghouse Report

February 9, 2017

In January the clearinghouse did not need to contact OSPR regarding any possible escort violations.

In January the clearinghouse did not receive any notifications of vessels arriving at the Pilot Station without escort paperwork.


In January there were 93 tank vessel arrivals; 14 ATB’s, 5 Chemical Tankers, 18 Chemical/Oil Tankers, 24 Crude Oil Tankers, 2 LPG, 19 Product Tankers, and 11 Tugs with Barges.

In January there were 279 total arrivals.
San Francisco Bay Clearinghouse Report For January 2017

### San Francisco Bay Region Totals

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanker arrivals to San Francisco Bay</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>ATB arrivals</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Barge arrivals to San Francisco Bay</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Total Tanker and Barge Arrivals</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>Total movements</td>
<td>333</td>
<td>386</td>
</tr>
<tr>
<td>Escorted tank ship movements</td>
<td>181</td>
<td>325</td>
</tr>
<tr>
<td>Unescorted tank ship movements</td>
<td>144</td>
<td>161</td>
</tr>
<tr>
<td>Escorted tank barge movements</td>
<td>37</td>
<td>100</td>
</tr>
<tr>
<td>Unescorted tank barge movements</td>
<td>152</td>
<td>61</td>
</tr>
<tr>
<td>Escorted tank barge movements</td>
<td>29</td>
<td>164</td>
</tr>
<tr>
<td>Unescorted tank barge movements</td>
<td>123</td>
<td>45</td>
</tr>
</tbody>
</table>

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

Escorts reported to OSPR

<table>
<thead>
<tr>
<th>Movements by Zone</th>
<th>Zone 1</th>
<th>%</th>
<th>Zone 2</th>
<th>%</th>
<th>Zone 4</th>
<th>%</th>
<th>Zone 6</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total movements</td>
<td>190</td>
<td>42.11%</td>
<td>324</td>
<td>47.22%</td>
<td>0</td>
<td>0.00%</td>
<td>146</td>
<td>43.84%</td>
<td>660</td>
<td>45.00%</td>
</tr>
<tr>
<td>Unescorted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>movements</td>
<td>80</td>
<td>42.11%</td>
<td>153</td>
<td>47.22%</td>
<td>0</td>
<td>0.00%</td>
<td>64</td>
<td>43.84%</td>
<td>297</td>
<td>45.00%</td>
</tr>
<tr>
<td>Tank ships</td>
<td>66</td>
<td>34.74%</td>
<td>117</td>
<td>36.11%</td>
<td>0</td>
<td>0.00%</td>
<td>56</td>
<td>38.36%</td>
<td>239</td>
<td>36.21%</td>
</tr>
<tr>
<td>Tank barges</td>
<td>14</td>
<td>7.37%</td>
<td>36</td>
<td>11.11%</td>
<td>0</td>
<td>0.00%</td>
<td>8</td>
<td>5.48%</td>
<td>58</td>
<td>8.79%</td>
</tr>
<tr>
<td>Escorted movements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>movements</td>
<td>110</td>
<td>57.89%</td>
<td>171</td>
<td>52.78%</td>
<td>0</td>
<td>0.00%</td>
<td>82</td>
<td>56.16%</td>
<td>363</td>
<td>55.00%</td>
</tr>
<tr>
<td>Tank ships</td>
<td>102</td>
<td>53.68%</td>
<td>143</td>
<td>44.14%</td>
<td>0</td>
<td>0.00%</td>
<td>73</td>
<td>50.00%</td>
<td>318</td>
<td>48.18%</td>
</tr>
<tr>
<td>Tank barges</td>
<td>8</td>
<td>4.21%</td>
<td>28</td>
<td>8.64%</td>
<td>0</td>
<td>0.00%</td>
<td>9</td>
<td>6.16%</td>
<td>45</td>
<td>6.82%</td>
</tr>
</tbody>
</table>

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.
## VESSEL TRANSFERS

<table>
<thead>
<tr>
<th></th>
<th>Total Transfers</th>
<th>Total Vessels Monitored</th>
<th>Total Transfers Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>JANUARY 1 - 31, 2016</td>
<td>211</td>
<td>81</td>
<td>38.39</td>
</tr>
<tr>
<td>JANUARY 1 - 31, 2017</td>
<td>202</td>
<td>93</td>
<td>46.04</td>
</tr>
</tbody>
</table>

## CRUDE OIL / PRODUCT TOTALS

<table>
<thead>
<tr>
<th></th>
<th>Crude Oil ( D )</th>
<th>Crude Oil ( L )</th>
<th>Overall Product ( D )</th>
<th>Overall Product ( L )</th>
<th>GRAND TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>JANUARY 1 - 31, 2016</td>
<td>13,047,212</td>
<td>0</td>
<td>17,630,712</td>
<td>7,138,773</td>
<td>24,769,485</td>
</tr>
<tr>
<td>JANUARY 1 - 31, 2017</td>
<td>13,447,300</td>
<td>100,000</td>
<td>17,743,400</td>
<td>7,099,033</td>
<td>24,842,433</td>
</tr>
</tbody>
</table>

## OIL SPILL TOTAL

<table>
<thead>
<tr>
<th></th>
<th>TERMINAL</th>
<th>VESSEL</th>
<th>Total</th>
<th>Gallons Spilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>JANUARY 1 - 31, 2016</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>JANUARY 1 - 31, 2017</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1 Gallon - MDO</td>
</tr>
</tbody>
</table>

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.
Updates on California Vessel Fuel and At-Berth Regulations

San Francisco Bay Harbor Safety Committee
February 9, 2017

Paul Milkey, Staff Air Pollution Specialist
Technical Analysis Section
California Air Resources Board
Overview

- Update on implementation of the Vessel Fuel Regulation
- Overview of the At-Berth Regulation
- Potential amendments to the At-Berth Regulation
  - Special case: tankers

http://www.arb.ca.gov/marine
California Vessel Fuel Regulation

- Board approved in 2008, implemented in July, 2009
- Designed to reduce NOx, SOx, and diesel PM
- Applies to main & auxiliary engines, & auxiliary boilers within 24 nm of coastline
- Step down in sulfur levels
- Practical experience supported IMO fuel standards in federal ECA
**Phased Fuel Sulfur Requirements**

<table>
<thead>
<tr>
<th>Fuel Requirement</th>
<th>Effective Date</th>
<th>California OGV Fuel Requirement Percent Sulfur Content Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>July 1, 2009</td>
<td>Marine gas oil (DMA) at or below 1.5% sulfur; or</td>
</tr>
<tr>
<td></td>
<td>August 1, 2012</td>
<td>Marine diesel oil (DMB) at or below 0.5% sulfur</td>
</tr>
<tr>
<td>Phase II*</td>
<td>January 1, 2014</td>
<td>Both marine gas oil (DMA) and marine diesel oil (DMB) at or below 0.1% sulfur</td>
</tr>
</tbody>
</table>

* Federal ECA also required 0.1% sulfur fuel as of January 1, 2015.
OGV Fuel Regulation
Coordination with Federal Emission Control Area (ECA)

- Sulfur limits harmonized in 2015
  - California experience paved way for North American ECA

- Sunset of CARB regulation possible if equivalent emission reductions achieved by ECA
  - Decision by Executive Officer to keep CA Rule for now, reevaluate by early 2018
  - CARB is accommodating vessels using scrubbers & low sulfur heavy fuels
OGV Fuel Regulation

Safety Exemption

- Used by master when use of distillate fuel would endanger vessel/crew/cargo
  - Must be beyond master’s reasonable control, such as mechanical problem, inclement weather, medical emergency
  - Used 8 times in 2014, none in 2015 or 2016

- Use exemption immediately
  - notify CARB within 24 hours after use of exemption, and four days to provide documentation
Overview
At-Berth Regulation
At-Berth Regulation

Background

- At-Berth Regulation designed to reduce PM and NOx from diesel auxiliary engines of vessels in California
- Board approved in December 2007 and effective January 2009
- Reduction requirements phase-in over time from 2010 to 2020
At-Berth Regulation

Regulated Fleets

- Container & reefer fleets: 25+ visits per year
- Passenger fleets: 5+ visits per year

Container Vessels

Refrigerated (Reefer) Cargo Vessels

Passenger Vessels
Two Compliance Pathways
- Reduced Onboard Power Generation Option (ROPG)
- Equivalent Emissions Reduction Option (EER)

All shore-power vessels must plug-in when visiting compatible shore power berths
Fleets have two requirements

- Reduce fleet auxiliary engine power
  - 50% by 2014, 70% by 2017, and 80% by 2020
- Connect a percentage of fleet vessels visits to shore power
  - 50% by 2014, 70% by 2017, and 80% by 2020
  - Vessels may operate auxiliary engines for up to three hours during a shore power visit
Fleets must reduce auxiliary engine emissions with approved alternative control technology

- Control technology must have an approved test plan for demonstrating emission reductions
- Control factor is based on approved emission measurements
At-Berth Regulation

Affected Ports

- San Francisco
- Oakland
- Hueneme
- Los Angeles (POLA) & Long Beach (POLB) *
- San Diego

* POLA & POLB are considered one port in the Regulation
At-Berth Regulation

Requirements

• 2007 CA rule for power reductions from vessels at berth using grid-based shore power

• Affects container, refrigerated cargo and passenger vessels

<table>
<thead>
<tr>
<th>Year</th>
<th>% of vessel visits using shore power</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>50%+</td>
</tr>
<tr>
<td>2017</td>
<td>70%+</td>
</tr>
<tr>
<td>2020</td>
<td>80%+</td>
</tr>
</tbody>
</table>

Shore power ready in CA:
• 23 terminals/63 berths
• >200 vessels
Alternative at-berth reduction technologies for compliance are approved.

- Two barge-mounted systems approved for container vessels.
- Room for additional innovative technologies.
Supersedes previous advisories issued in 2013 and 2015

Provides flexibility by addressing:

- Shore power berth availability
- Vessel commissioning
- Difficulties in connecting/disconnecting within the “3-hour” limit
- Use of approved alternatives to shore power under the ROPG option
- Use of new technologies evaluated under an ARB-approved test plan
- Use of an annual compliance period (vs. quarterly)
Potential Amendments
At-Berth Regulation
At-Berth Regulation

Goals of Amendments

- Address implementation issues & increase flexibility
- Increase emission reductions from the Regulation
At-Berth Regulation
Amendments

- Address specific challenges identified in regulatory advisories
- Explore possibilities for additional emission reductions from:
  - Additional vessel types (tankers, bulk, auto carriers)
  - Adjust fleet size subject to regulation
  - New technologies
  - Boilers
  - Other regulatory changes
- Workshop planned for Spring 2017
Special Case: Tankers
2014 California Vessel Visits

Visits by Vessel Type*

- **Tankers**: 1900 visits (22%)
- **Container**: 47%
- **Auto Carrier**: 10%
- **Bulk**: 9%
- **Cruise**: 7%
- **Other**: 1%
- **General Cargo (includes Reefers)**: 3%

* California State Lands Commission data. Total of 8,467 visits.
** Container, passenger, and reefer vessels covered by the At-Berth Regulation. General cargo includes reefers.
Special Case: Tankers
Ocean-going Vessel At-Berth Emissions

Diesel Particulate Matter (PM) Emissions*

- Tankers: 44%
- Container Ships: 39%

* 2014 ARB Emissions Inventory
**Special Case: Tankers**

Ocean-going Vessel At-Berth Emissions

**Nitrogen Oxides (NOx) Emissions**

- Tankers: 34%
- Container Ships: 43%

* 2014 ARB Emissions Inventory
Special Case: Tankers
Tanker Auxiliary Engine & Boiler
At-Berth Emissions

CO₂ Emissions*

- Boiler Emissions 85%
- Auxiliary Engines 15%

* 2014 ARB Emissions Inventory.
CO₂ emissions track fuel use and most emissions.
Special Case: Tankers
Potential Tanker Control Options for Discussion

♦ Landside/terminal-based controls
  – Electric booster pumps for crude oil
  – Terminal/refinery modifications
  – Barge or land-based emission controls
  – Shore-side power

♦ Vessel-based controls
  – Dual-fueled boilers that can use natural gas
  – Advanced boiler design (low NOx burners, more efficient boilers using super-heated steam)
Summary
California Statewide OGV Emission Trends 2000-2030*

*Includes all OGV regulations.
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