

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, May 11, 2017

Port of San Francisco

Pier 1 Conference Center

The Embarcadero

San Francisco, 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 10:03.

Alan Steinbrugge, 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. Scott Cooper** (A), Chevron Shipping Company; **Lilli Ferguson** (A), NOAA; **Aaron Golbus** (M), Port of San Francisco; **Scott Grindy** (A), San Francisco Marine Small Craft Harbor; **Benjamin Huber** (M), Westar Marine Services; **Phil Kipper** (A), San Francisco Bay Keeper; **Capt. Tom Kirsch** (M), Blue and Gold Fleet; **MJR Kevin McCormick** (A), US Army Corps of Engineers; **Jim McGrath** (M), Bay Conservation and Development Commission; **Jeff Robbins** (M), General Steamship Corp; **Alan Steinbrugge** (A), San Francisco Marine Exchange; **CDR Jen Stockwell** (A), United States Coast Guard; **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 April 13, 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- CMD Jen Stockwell

- LT Marcia Medina read from the April- 2017 Prevention/Response Report (attached).
- Advised that recovery of sunken crane barge Vengeance off Yerba Buena Island is progressing under Unified Command. The vessel is directly above of the Transbay BART Tube which

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complicates salvage operations. The barge has been righted on the sea floor and will be raised in the coming weeks. A Safety Zone is in effect.

- Advised of an 87 foot yacht which had bilge pump issues that caused a reoccurring release of diesel into Marina Bay Harbor over the course of several days. Report oil sheens and pollution to the USCG immediately.
- Advised that emergency dredging has been approved in the Sacramento and Stockton channels due to increased shoaling.
- Announced that the SF Bay Regional Port Reopening Coalition will be holding a Work Group meeting on May 25, 2017 regarding WETA emergency ferry service. Another meeting will be held on June 15, 2017 regarding emergency fuel and utilities.
- LT Medina advised that the USCG has compiled annual pollution and port safety statistics for 2016 (attached).
- Jim McGrath thanked the USCG for their recent response to a swamped recreational vessel in Berkeley. Two people were rescued and treated for hypothermia.

Army Corps of Engineers Report- MJR Kevin McCormick

- Read from the US Army Corps of Engineers, San Francisco District Report (attached). Debris removal totals are still above average and include ten abandoned vessels. More debris is expected due to snow melt.
- John Hummer, MARAD, asked about delta levee conditions. Jim Mazza advised that the Corps will provide information about levees at the next HSC meeting.
- Aaron Golbus requested a new survey of Islais Creek Channel.
- Jeff Robbins asked about the timeline for emergency dredging in the Stockton and Sacramento channels. MJR McCormick advised that the contract will be awarded in July.
- Jim Anderson thanked the Army Corps for allowing the use of their dock to facilitate salmon release.

Clearing House Report- Alan Steinbrugge (report attached)

OSPR Report- David Mighetto

- Announced several HSC membership vacancies. The positions of Alternate representing commercial fishing, Member representing Port of Benicia, Alternate representing tug or tank

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vessel operators and Alternate representing Port of San Francisco are available. A replacement is also needed for Capt. Griffin Patrick, Tesoro, who has left the HSC.

- Advised that OSPR is participating in the crane barge Vengeance recovery.

NOAA Report- Lilli Ferguson

- Advised that the NWS has provided spot forecasts to aid in the Vengeance salvage operation. These localized forecasts are available to government agencies. Trajectory analysis was also provided.
- Advised of a multi-agency project on tsunami response planning in the Bay Area that will be presented at the next HSC meeting.
- Advised that voluntary offshore vessel speed restrictions are in effect from May 1st to November 15th to reduce the risk of whale strikes. Report injured whale sightings to NOAA at: 877-767-9425 or the USCG on Ch. 16.
- Advised that NOAA has released their National Charting Plan for review and comment. Deadline is June 1st.
- Advised of the need to update old charts in the HSC Plan. Linda Scourtis and the Marine Exchange will facilitate.

State Lands Commission Report- Rollie Cabbay (report attached)

USCG Cybersecurity Presentation – CMD Maureen Johnson

- CMD Maureen Johnson, USCG, gave a presentation on Cyber Risk Management in the Marine Transportation System (slides attached). Cybersecurity is a national priority. Cyber-attacks have real world impacts which can cause disruptions and compromise Marine Transportation Systems. Wi-Fi devices including many security camera systems can be particularly vulnerable. Vessel navigation systems and GPS can also be susceptible. Malware infecting the Electronic Chart Display and Information System (ECDIS) has been reported on ships affecting vessel routing. Container terminals and a German nuclear power plant have also been compromised in the past.
- The cybersecurity threat is growing with the development of new tools and phishing scams. Although some targeted cyber-attacks are unavoidable, the majority are crimes of opportunity. Countermeasures include performing risk assessment and cybersecurity training. Keeping software updated, use of secure passwords and blocking/ignoring phishing email are

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recommended. Cybersecurity assessments and resources are provided by the DHS. The Industrial Control Systems Cybersecurity Emergency Response Team (ICS-CERT) with the National Cybersecurity and Communications Integration Center (NCCIC) provide a free Cyber Security Evaluation Tool (CSET) to help organizations perform self-assessment of their systems and improve security. The NCCIC provides a variety of cybersecurity prevention and response services and is available 24 hours a day at: 888-282-0870.

- Capt. Korwatch announced that a USCG cybersecurity table top exercise is scheduled for May 24th-25th at the Richmond MSSC.

Work Group Reports-

Tug Work Group- Ted Blanckenburg advised that there was nothing to report. Capt. Korwatch confirmed that the SB 414 report has been officially sent to OSPR.

Navigation Work Group- Capt. Bob Carr advised that there was nothing to report.

Ferry Operations Work Group- Capt. Tom Kirsch advised that ferry industry continues to expand with more boats and facilities expected in the next few years.

Dredge Issues Work Group- Nothing to report.

PORTS Work Group- Nothing to report.

Prevention through People Work Group- Scott Grindy advised that Opening Day on the Bay took place on April 23rd and thanked those who participated.

Plan Update Work Group- Linda Scourtis advised that that she has received half of the Work Group reports so far. Plan voting is scheduled for the June HSC meeting.

PORTS Report- Alan Steinbrugge

- Advised that communications issues affecting the South Hampton Shoal buoy mounted current sensor have been repaired.
- Advised that planning continues with the Port of San Francisco to install a weather station and current sensor at Pier 27.

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Public Comment-

- Capt. Korwatch announced that Alan Steinbrugge will be retiring in November, 2017. Marcus Freeling, Marine Exchange, will be assuming HSC administrative duties.
- Capt. Korwatch announced that the Marine Exchange Mayday party is this afternoon.
- John Hummer, MARAD, announced that National Maritime Day is on May 22nd. An open house will be held aboard the GTS Admiral Callaghan and a WETA ship to ship refueling demonstration is planned.

Old Business- None

New Business-

- Lilli Ferguson advised that ocean temperature readings indicate that El Nino conditions could possibly develop this coming winter.

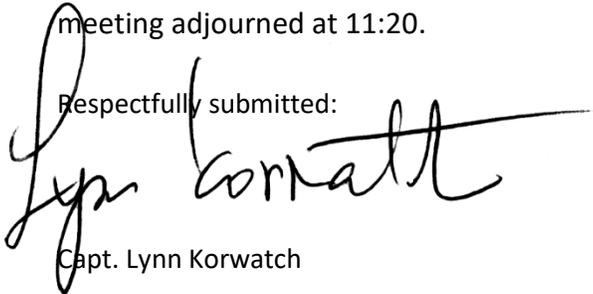
Next Meeting-

1000-1200, June 8, 2017
Port of Oakland
Exhibit 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 11:20.

Respectfully submitted:



Capt. Lynn Korwatch

PREVENTION / RESPONSE - SAN FRANCISCO HARBOR SAFETY STATISTICS

April 2017

PORT SAFETY CATEGORIES*	Apr-2017	Apr-2016	**3yr Avg
Total Number of Port State Control Detentions:	0	0	0.78
SOLAS (0), STCW (0), MARPOL (0), ISM (0), ISPS (0)			
Total Number of COTP Orders:	4	3	3.44
Navigation Safety (4), Port Safety & Security (0), ANOA (0)			
Marine Casualties (reportable CG 2692) within SF Bay:	17	12	9.33
Allision (0), Collision (0), Fire (0), Capsize (0), Grounding (2), Sinking (1)			
Steering (1), Propulsion (7), Personnel (2), Other (3), Power (1)			
Total Number of (routine) Navigation Safety issues/Letters of Deviation:	0	4	3.86
Radar (0), Gyro (0), Steering (0), Echo Sounder (0), AIS (0)			
AIS-835 (0), ARPA (0), Speed Log (0), R.C. (0), Other (0)			
Reported or Verified "Rule 9" or other Navigational Rule Violations:	0	1	0.42
Significant Waterway events/Navigation related Cases:	1	0	0.36
Total Port Safety (PS) Cases opened	22	20	18.19
MARINE POLLUTION RESPONSE			
Pollution Discharge Sources (Vessels)	Apr-2017	Apr-2016	**3yr Avg
U.S. Commercial Vessels	2	0	0.89
Foreign Freight Vessels	0	0	0.11
Public Vessels	1	0	0.50
Commercial Fishing Vessels	0	0	0.39
Recreational Vessels	2	1	3.56
Pollution Discharge Sources (Facilities)			
Regulated Waterfront Facilities	0	0	0.28
Regulated Waterfront Facilities - Fuel Transfer	0	0	0.00
Other Land Sources	0	3	1.11
Mystery Spills - Unknown Sources	6	6	4.53
Number of Pollution Incidents within San Francisco Bay			
Spills < 10 gallons	5	4	4.44
Spills 10 - 100 gallons	0	0	1.17
Spills 100 - 1000 gallons	0	0	0.17
Spills > 1000 gallons	0	0	0.06
Spills - Unknown Size	6	6	5.64
Total Pollution Incidents	11	10	11.47
Oil Discharge/Hazardous Materials Release Volumes by Spill Size			
Estimated spill amount from U.S. Commercial Vessels	6.00	0.00	15.08
Estimated spill amount from Foreign Freight Vessels	0.00	0.00	8.42
Estimated spill amount from Public Vessels	15.00	0.00	1.68
Estimated spill amount from Commercial Fishing Vessels	0.00	0.00	9.90
Estimated spill amount from Recreational Vessels	7.00	1.00	39.42
Estimated spill amount from Regulated Waterfront Facilities	0.00	0.00	3.03
Estimated spill amount from Regulated Waterfront Facilities - Fuel Transfer	0.00	0.00	0.00
Estimated spill amount from Other Land Sources	0.00	3.00	1.73
Estimated spill amount from Unknown Sources (Mystery Sheens)	unk	unk	0.56
Total Oil Discharge and/or Hazardous Materials Release (Gallons)	28.00	4.00	79.81
Penalty Actions			
Civil Penalty Cases	0	0	0.06
Notice of Violations	0	0	0.67
Letters of Warning	3	0	3.08
Total Penalty Actions	3	0	3.81

* 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 (APR 2017)

MARINE CASUALTIES

Reduction of Propulsion (06APR17): A foreign flag tank vessel experienced a reduction of propulsion while transiting outbound to sea. A COTP Order was issued directing the vessel to proceed to Anchorage 9 until causative factors could be determined. The vessel owner contacted the engine manufacturer for guidance on making changes to recommended settings. The vessel was required to have a one tug escort to Mile Rocks to ensure proper operation of vessel's main propulsion. COTP Order was self-lifting once the Pilot was satisfied with the vessel's propulsion capabilities. LOP was not attributed to fuel switching. Case Closed.

Loss of Propulsion (12APR17): A foreign flag container vessel experienced a loss of propulsion and immediately proceeded to Anchorage 7. The vessel was issued a COTP Order to remain at Anchorage 7 until causative factors were determined and proper operation of the vessel's main propulsion was witnessed. The loss of propulsion was immediately attributed to failure of a mechanical linkage; the COTP Order was lifted. LOP was not attributed to fuel switching. Case Closed.

Equipment Failure (16APR17): A U.S. flag tug and barge experienced an equipment failure 25NM west of Point Arena due to overheated generators. An assist tug delivered spare parts and the crew repaired the generator. Case Closed.

Reduction of Propulsion (18APR17): A foreign flag gas carrier experienced a reduction in propulsion and departed the VTS zone to troubleshoot the problem. The crew identified and repaired the issue and successfully entered the port with no further issues. Case Closed.

Grounding (18APR17): A U.S. flag tug and empty barge grounded while transiting through the San Joaquin River and subsequently refloated during flood tide. A COTP Order was issued to have a Marine Inspector verify vessel seaworthiness prior to departure. After successful exam of both tug and barge the COTP Order was lifted. Case Closed.

Loss of Propulsion/Loss of Steering (20APR17): A U.S. flag passenger vessel lost propulsion and steering when its cable parted during transit. Vessel was issued a CG-835 prohibiting operations until repairs were completed to the satisfaction of an attending Marine Inspector. Case Pends.

Loss of Propulsion (24APR17): A U.S. flag passenger vessel experienced a reduction in propulsion. The vessel voluntarily took themselves out of service and made repairs. Proper operation was witnessed by an attending Marine Inspector. Case Closed.

Equipment Failure (30APR17): A foreign flag vessel was unable to use their starboard anchor while approaching Anchorage 9. The crew identified cause of failure and made necessary repairs while at anchorage. An attending Class Surveyor witnessed satisfactory operation anchoring system. Case Closed.

VESSEL SAFETY CONDITIONS

Unsafe Conditions (15APR17): An uninspected U.S. commercial fishing vessel experienced an engine casualty. A COTP Order was issued to remain at berth after several safety discrepancies were identified during a dockside exam as part of a post Search and Rescue boarding. Case Pends.

NAVIGATIONAL SAFETY

Nothing Significant to Report

SIGNIFICANT INCIDENT MANAGEMENT DIVISION CASES

07APR17: A 112 ft crane barge capsized and sank in the San Francisco Bay with 4000 gallons of diesel and 300 gallons of hydraulic oil on board. A light diesel sheen was observed the first morning. No further discharge has been observed since. Pollution removal and salvage operations are ongoing. Case Pends.

15APR17: A 87 ft yacht with a pollution potential of 400 gallons, discharged approximately 5 gallons of diesel into Marina Bay Harbor. Upon investigation, it was determined that the discharge had been occurring regularly for several days prior to notification. Quantification was based on recoverable product after notification. Case Pends.

Sector San Francisco - Port Safety Statistics: 2016

Total Reported Marine Casualties By Type/Month for 2016 - Chart 1

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg per month
Allision	1	1	0	1	1	0	1	0	1	0	1	1	8	0.7
Collision	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1
Fire	1	0	0	0	0	0	0	2	0	0	0	0	3	0.3
Capsize	0	1	0	0	0	0	0	0	0	0	0	0	1	0.1
Grounding	0	0	0	0	0	0	0	1	1	0	0	0	2	0.2
Sinking	0	0	0	1	1	0	0	0	0	2	1	0	5	0.4
Steering	3	1	0	2	1	0	1	0	0	1	0	0	9	0.8
Propulsion	4	1	2	6	3	4	1	1	4	3	5	4	38	3.2
Personnel	5	4	4	2	3	4	2	0	0	7	0	0	31	2.6
Other	1	1	2	0	0	1	4	2	4	2	2	2	21	1.8
Power	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1
Total	15	9	8	12	9	10	9	6	11	15	9	7	120	10.0

Total Letters of Deviation (LODs) Issues Due to Navigational Deficiencies/Month for 2016 - Chart 2

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg per month
Radar	0	1	0	1	3	0	0	3	0	0	0	1	9	0.8
Gyro Compass	0	0	0	2	0	0	0	1	0	1	0	0	4	0.3
Steering	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Echo Depth Sounder	1	0	1	0	1	1	1	2	1	1	1	0	10	0.8
AIS	0	8	4	1	0	0	0	3	1	0	0	0	17	1.4
ARPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Speed Log	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1
Other	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1
Total	1	9	6	4	4	1	1	9	2	2	2	1	42	3.5

Total Port State Control Detentions/Month for 2016 - Chart 3

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg per month
SOLAS	2	0	0	0	0	0	0	1	0	0	1	0	4	0.3
STCW	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
MARPOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
ISM	0	0	0	0	0	0	1	0	0	0	0	0	1	0.1
ISPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Total	2	0	0	0	0	0	1	1	0	0	1	0	5	0.4

Total COTP Orders/Month for 2016 - Chart 4

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg per month
Navigation Safety	6	0	3	3	2	2	0	3	4	0	1	2	26	2.2
Port Safety & Security	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1
ANOA	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1
Total	6	0	3	3	3	2	0	3	4	0	2	2	28	2.3

Total Reported Marine Casualties By Type/Year 2012-2016 - Chart 5

	2012	2013	2014	2015	2016	Total	Avg
Allision	11	18	10	4	8	51	10
Collision	0	0	0	3	1	4	1
Fire	4	3	2	4	3	16	3
Capsize	0	0	0	1	1	2	0
Grounding	6	8	6	3	2	25	5
Sinking	0	0	0	0	5	5	1
Steering	10	20	17	10	9	66	13
Propulsion	79	87	97	40	38	341	68
Personnel	8	23	13	3	31	78	16
Other	11	24	24	27	21	107	21
Power	0	0	0	3	1	4	1

Reported Rule 9 Violations/Month for 2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg per month
Reported Navigation Rule 9 Violations	0	1	0	1	1	0	1	1	0	0	0	0	5	0.77

Chart 1: Total Reported Marine Casualties by Type/Month for 2016

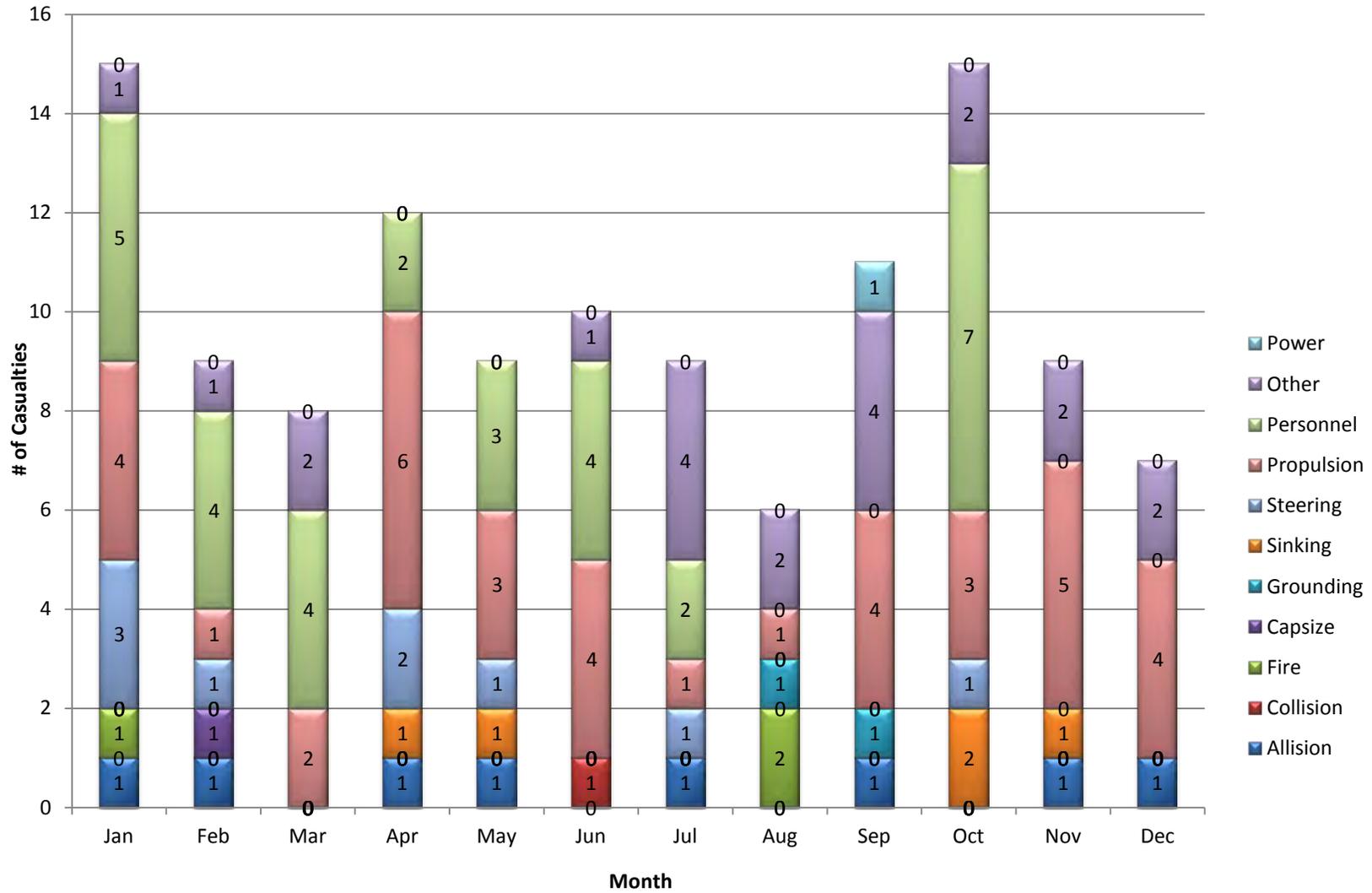


Chart 3: Total Port State Control Detentions/Month for 2016

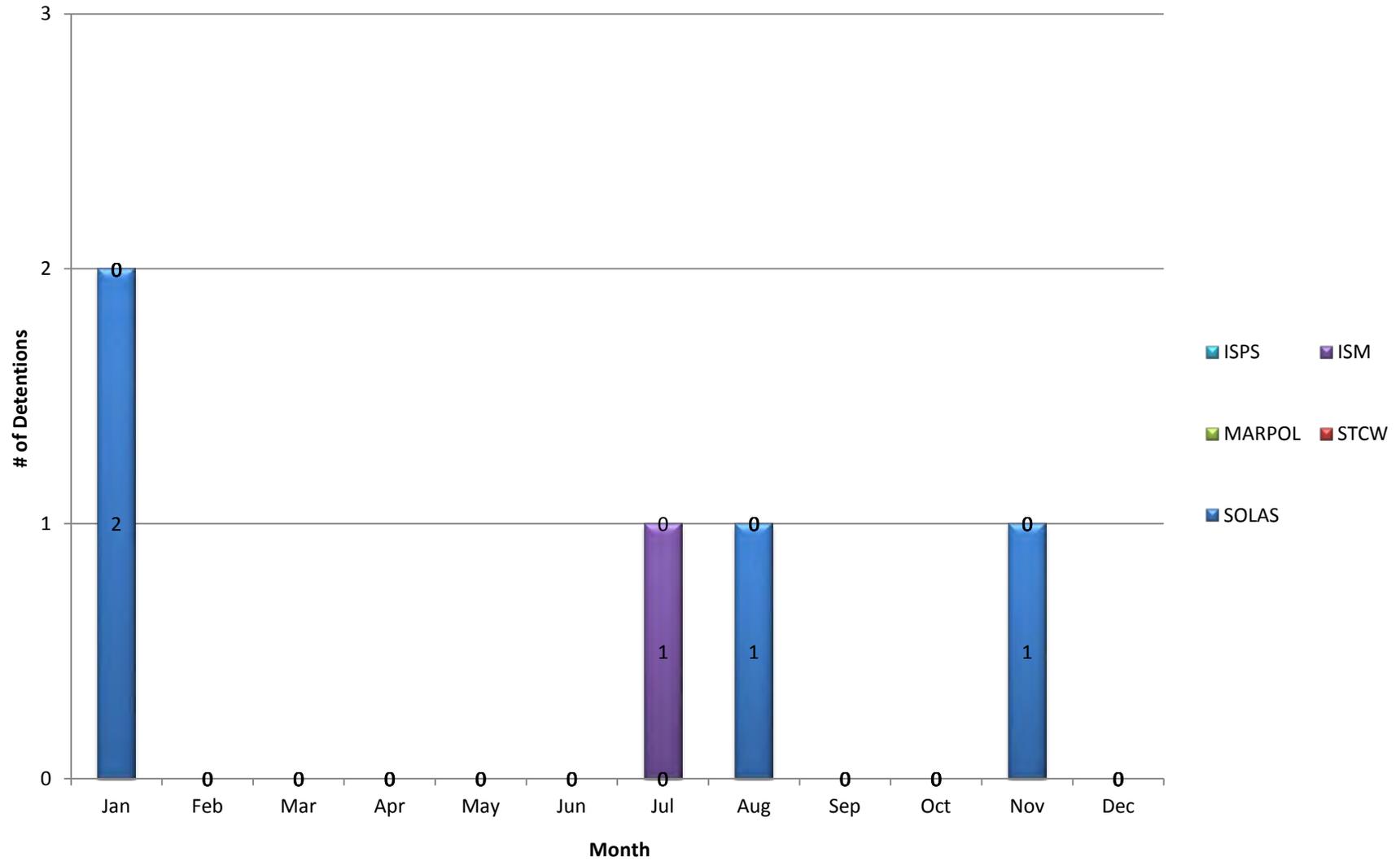
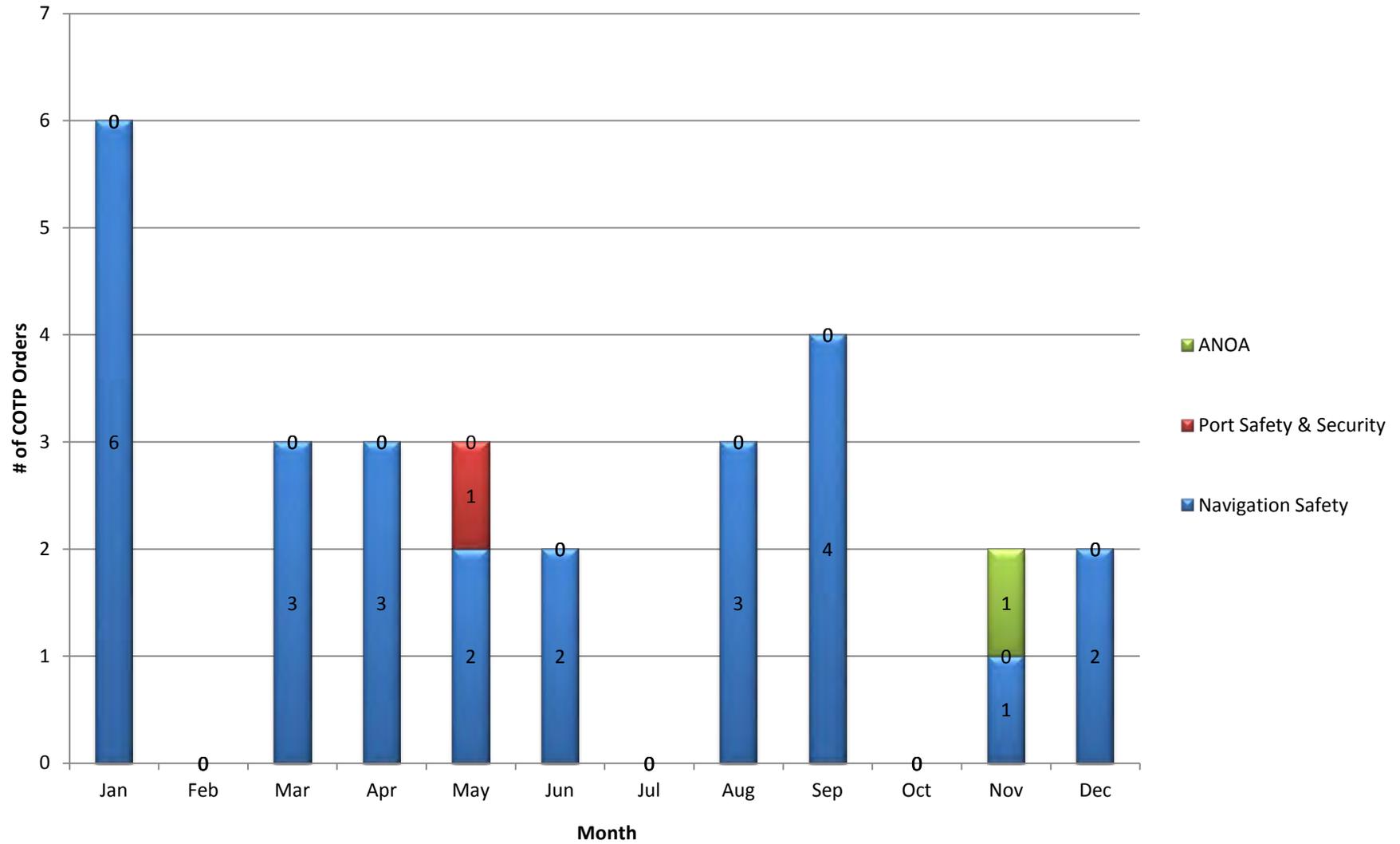
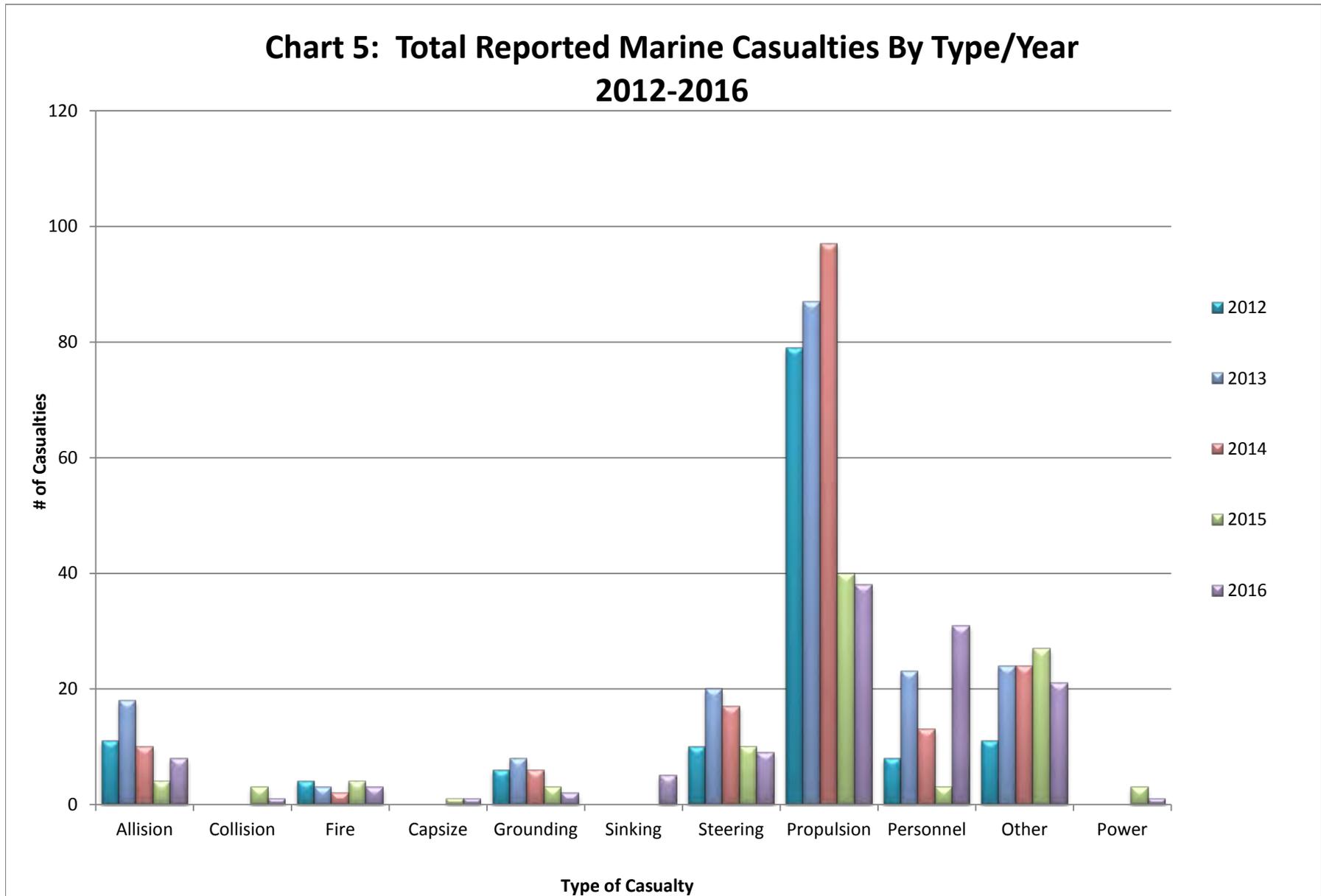


Chart 4: Total COTP Orders/Month for 2016



**Chart 5: Total Reported Marine Casualties By Type/Year
2012-2016**



* As of October 2012, all casualties occurring in or effecting the HSC jurisdiction are indicated in this report. The apparent increase in almost all casualty categories is likely an artifact of this change in reporting thresholds.

Sector San Francisco Pollution Statistics: 2016

Total Reported Oil Pollution Incidents/Yr - Chart 1

	2012	2013	2014	2015	2016	Total	Avg
Total Number of Oil Pollution Incidents	147	151	187	160	96	645	161

Total Reported Oil Spills by Source/Yr - Chart 2

	2012	2013	2014	2015	2016	Total	Avg
U.S. Commercial Vessels	12	13	12	10	9	56	11
Foreign Freight Vessels**	3	1	2	1	1	8	2
Public Vessel	14	12	8	6	5	45	9
Commercial Fishing Vessel	2	7	7	6	3	25	5
Recreational Vessel	24	56	68	56	25	229	46
Regulated Waterfront Facilities	9	2	4	4	1	20	4
Regulated Waterfront Facilities-Fuel Transfer**	1	0	0	0	0	1	0
Other Land Source*	16	20	27	16	7	86	17
Unknown Source	70	40	60	57	45	272	54

Total Reported Oil Pollution Incidents and Amounts/Month for 2016 - Chart 3

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
Total Number of Oil Pollution Incidents	4	10	9	10	9	4	10	7	8	7	6	12	96	8
Total Amount of Oil Discharged and/or Hazardous Material Released (<i>gallons</i>)	1	17	307	4	40	61.1	34	36	7.5	61.5	128	35	732	61

Total Reported Amount of Oil and/or Hazardous Material Released by Vessels/Month for 2016 - Chart 4

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
Total Amount of Oil and/or Hazardous Material Released (<i>gallons</i>)	1	17	302	1	40	60	33	36	7.5	61.5	128	33	720	60

Total Reported Amount of Oil and/or Hazardous Material Released by Non-Vessel Sources/Month for 2016 - Chart 5

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
Total Amount of Oil and/or Hazardous Material Released (gallons)	0	0	5	3	0	1	1	0	0	0	0	2	12	1

Total Reported Oil/Hazmat Pollution Incidents/Month for 2016 - Chart 6

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
# of Spills between 0 - 10 gallons	0	3	3	4	5	3	5	5	3	3	2	4	40	3.3
# of Spills between 10 - 100 gallons	1	1	0	0	2	1	1	1	0	1	0	2	10	0.8
# of Spills between 100 - 1,000 gallons	0	0	1	0	0	0	0	0	0	0	1	0	2	0.2
# of Spills 1,000 gallons >	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
# of Spills - Unknown size	3	6	5	6	2	0	4	1	5	3	3	6	44	3.7

Total Oil Discharge and/or Hazardous Material Release Volumes By Source (gallons)/Month for 2016 - Chart 7

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
U.S. Commercial Vessels	0	5	0	0	21	0	26	1	0	0.5	122	0	176	14.6
Foreign Freight Vessels	0	0	300	0	0	0	0	0	0	0	0	0	300	25.0
Public Vessels	0	0	1	0	3	0	0	0	0	1	5	0	10	0.8
Commercial Fishing Vessels	0	1	0	0	15	0	0	0	0	10	0	0	26	2.2
Recreational Vessels	1	11	1	1	1	60	7	35	7.5	50	1	33	209	17.4
Regulated Waterfront Facilities	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1
Regulated Waterfront Facilities-Fuel Transfer	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Other Land Sources	0	0	5	3	0	0.1	1	0	0	0	0	2	11	0.9
Unknown Source	unk	unk	unk	unk	unk	0	unk	unk	unk	unk	unk	unk	0	0.0

Total Pollution related Penalty Actions/ Month for 2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
Civil Penalty Cases for Period	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Notice of Violations (TKs)	1	1	1	0	0	1	1	0	0	0	1	0	6	0.5
Letter of Warning (LOW)	0	3	2	0	3	2	5	6	2	3	2	4	32	2.7

**Chart 1: Total Reported Oil Pollution Incidents/Yr
(2012-2016)**

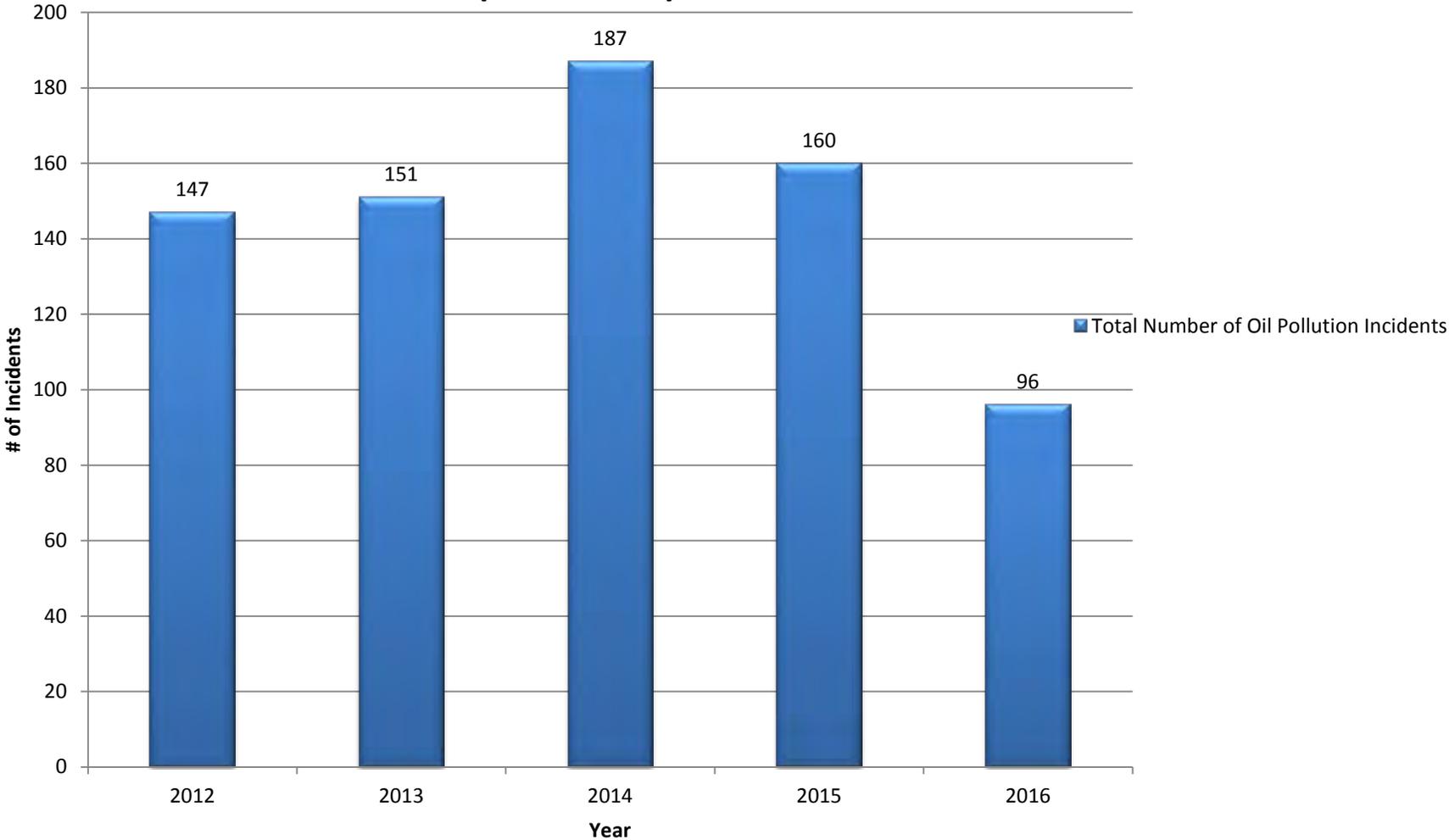


Chart 2: Total Reported Oil Spills by Source/Yr (2012-2016)

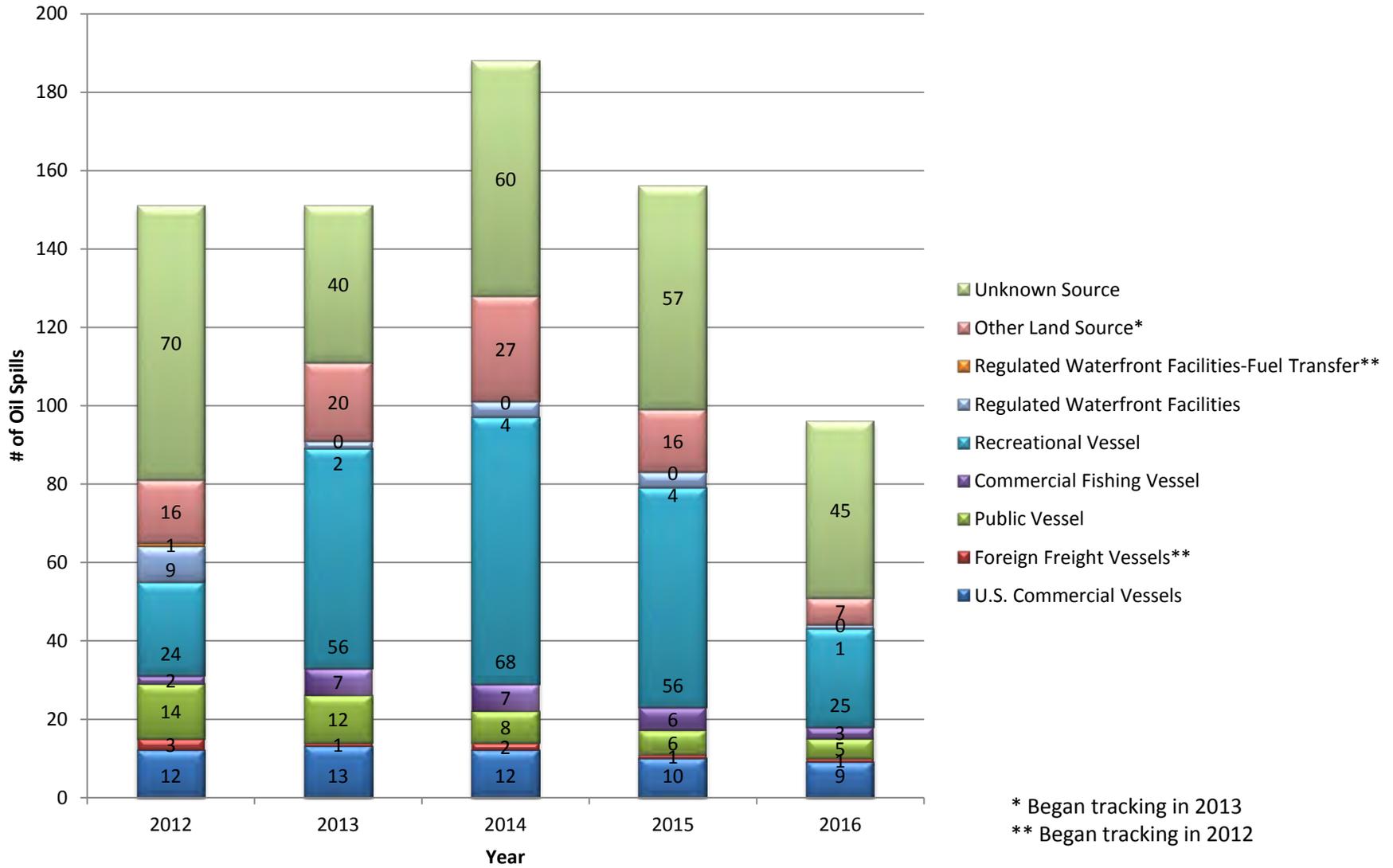


Chart 3: Total Reported Oil Pollution Incidents and Amounts/Month for 2016

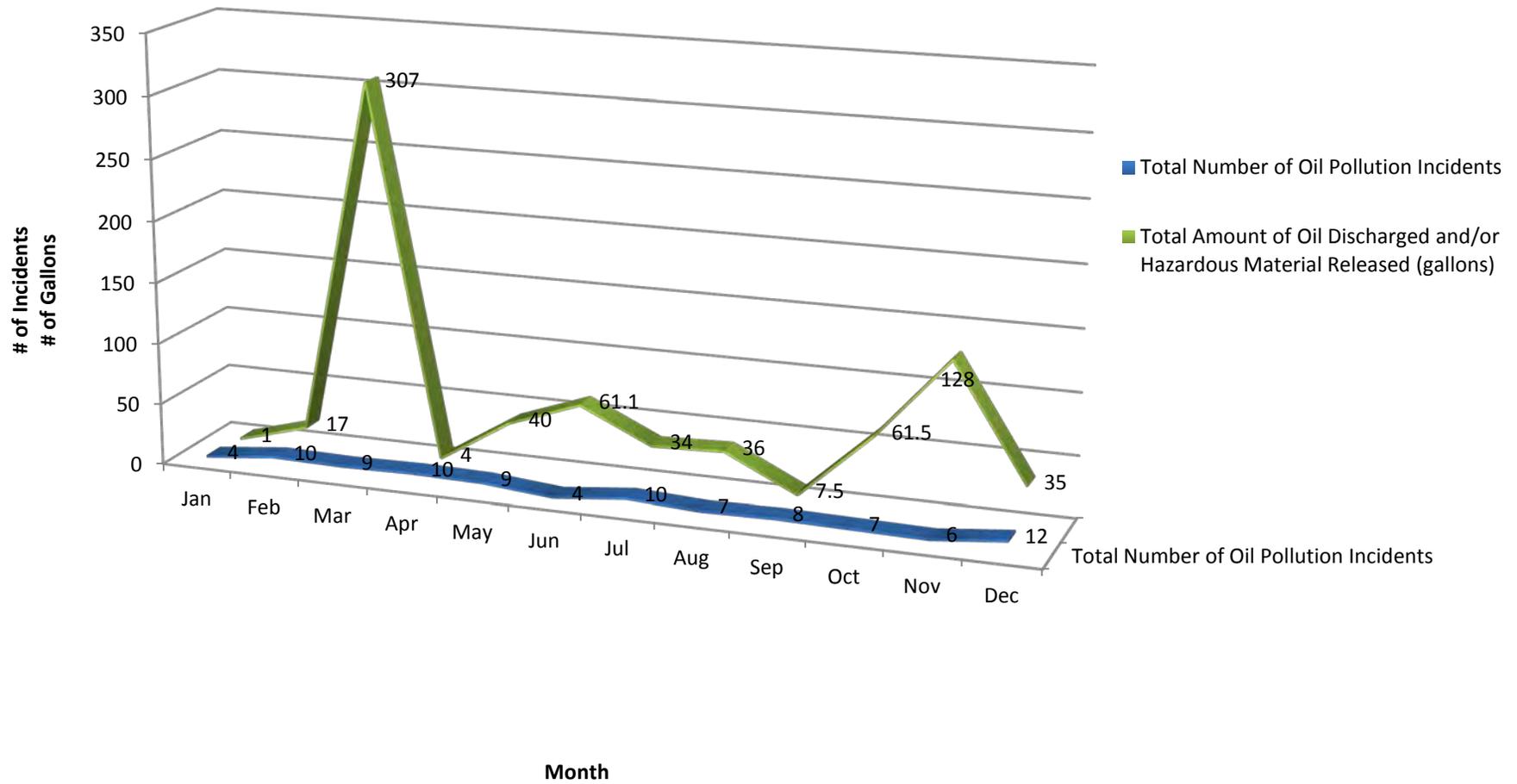


Chart 4: Total Amount of Oil and/or Hazardous Material Released By Vessels/Month for 2016

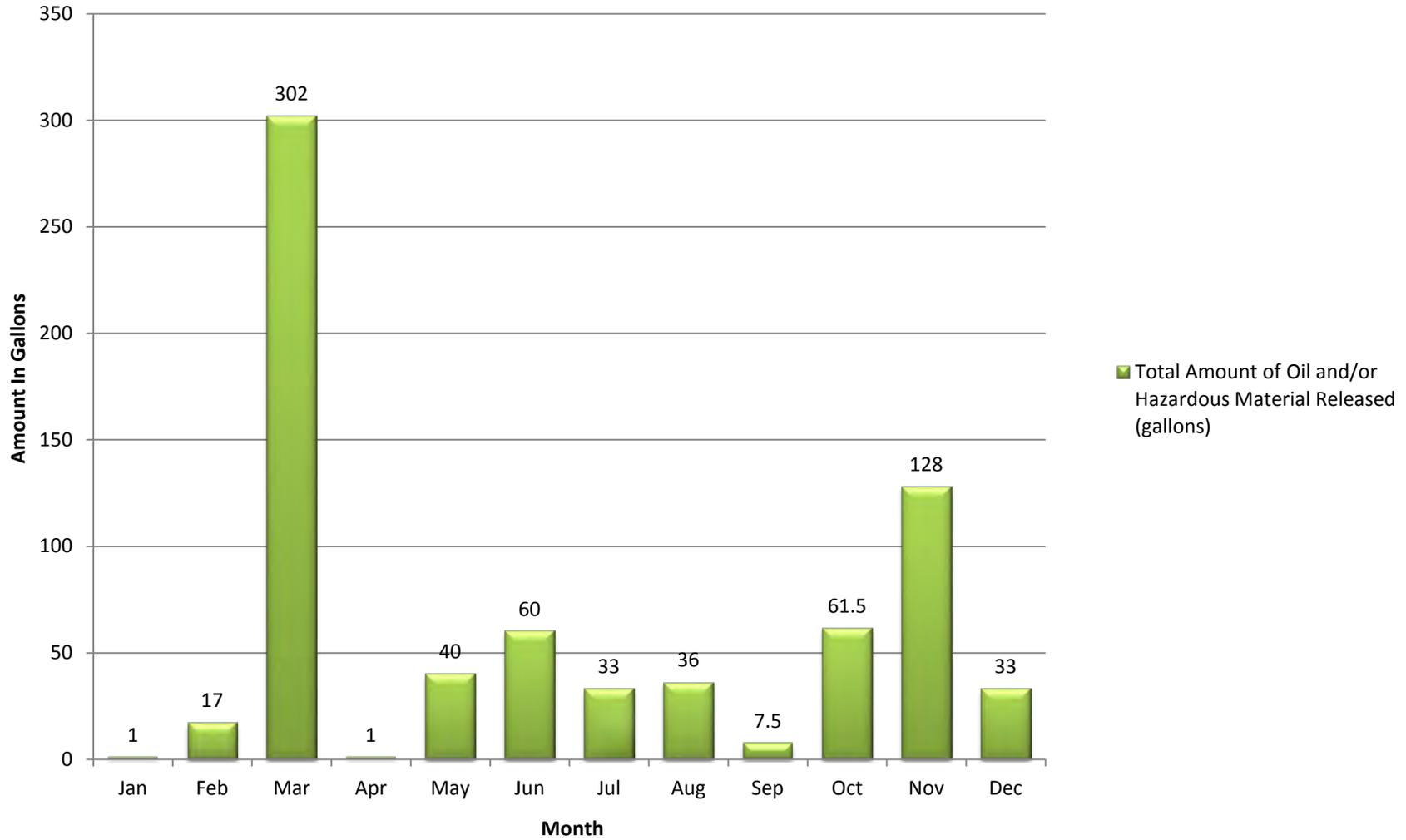


Chart 5: Total Reported Amount of Oil and/or Hazardous Material Released by Non-Vessels Sources/Month for 2016

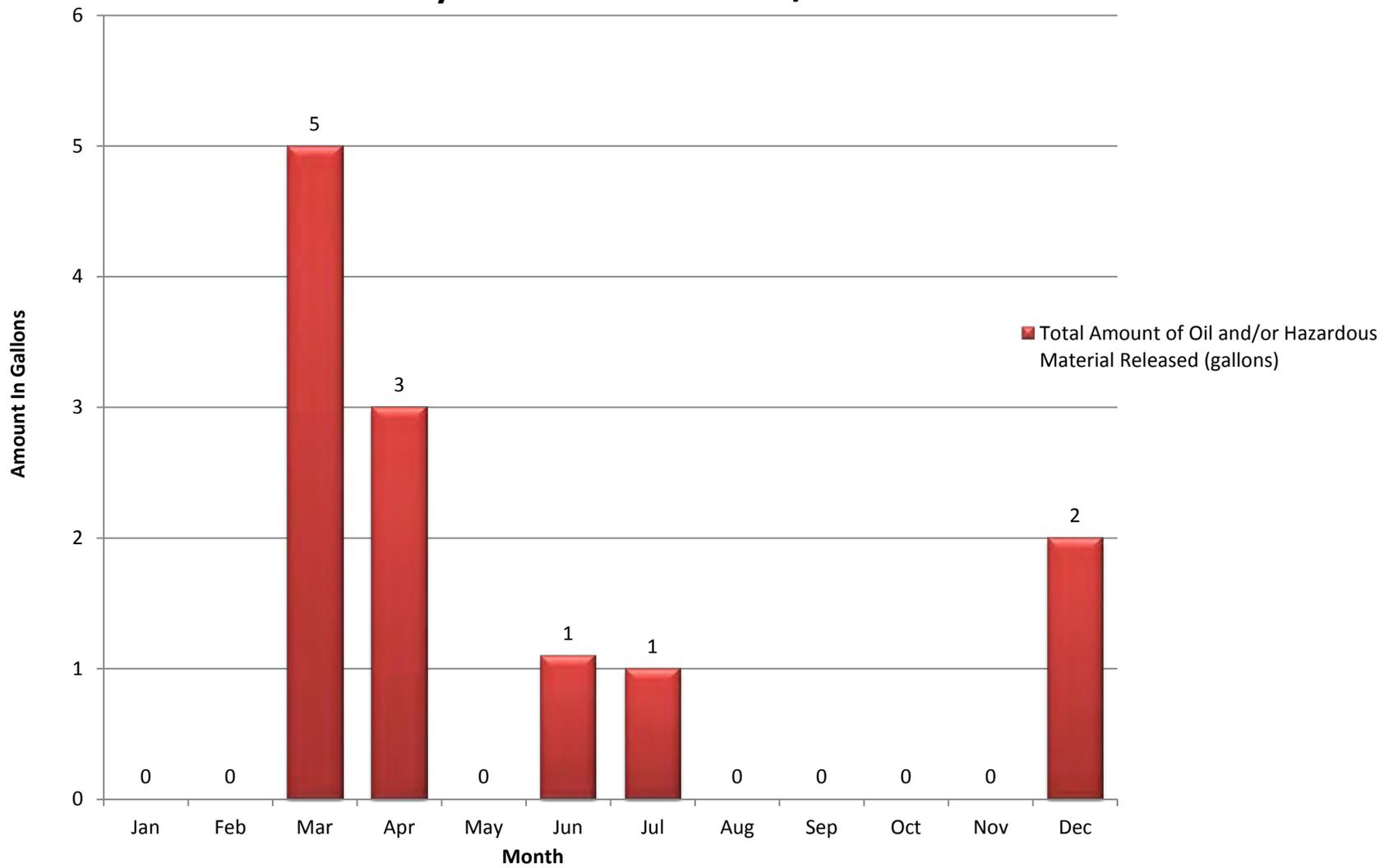


Chart 6: Total Reported Oil/Hazmat Pollution Incidents by Size/Month for 2016

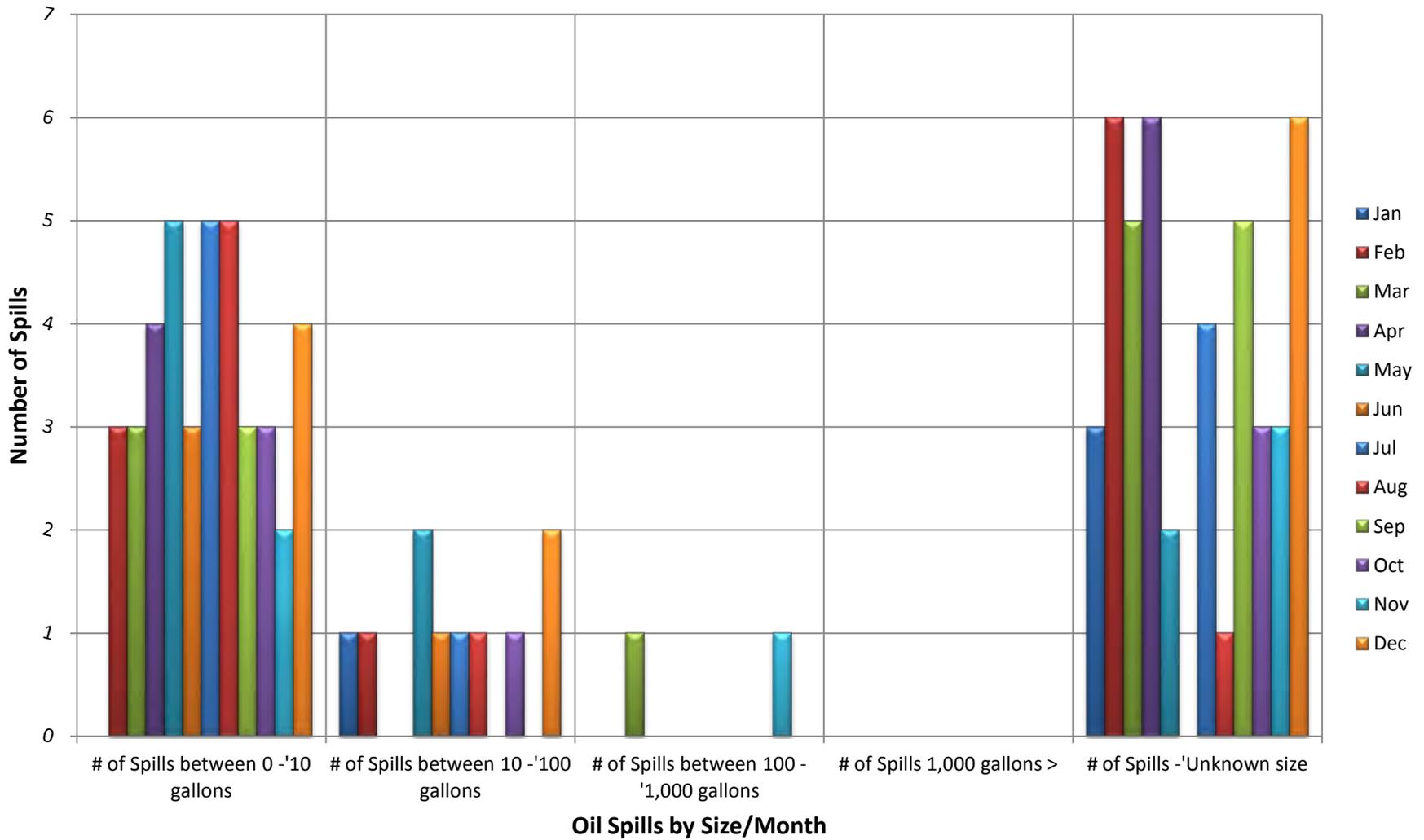
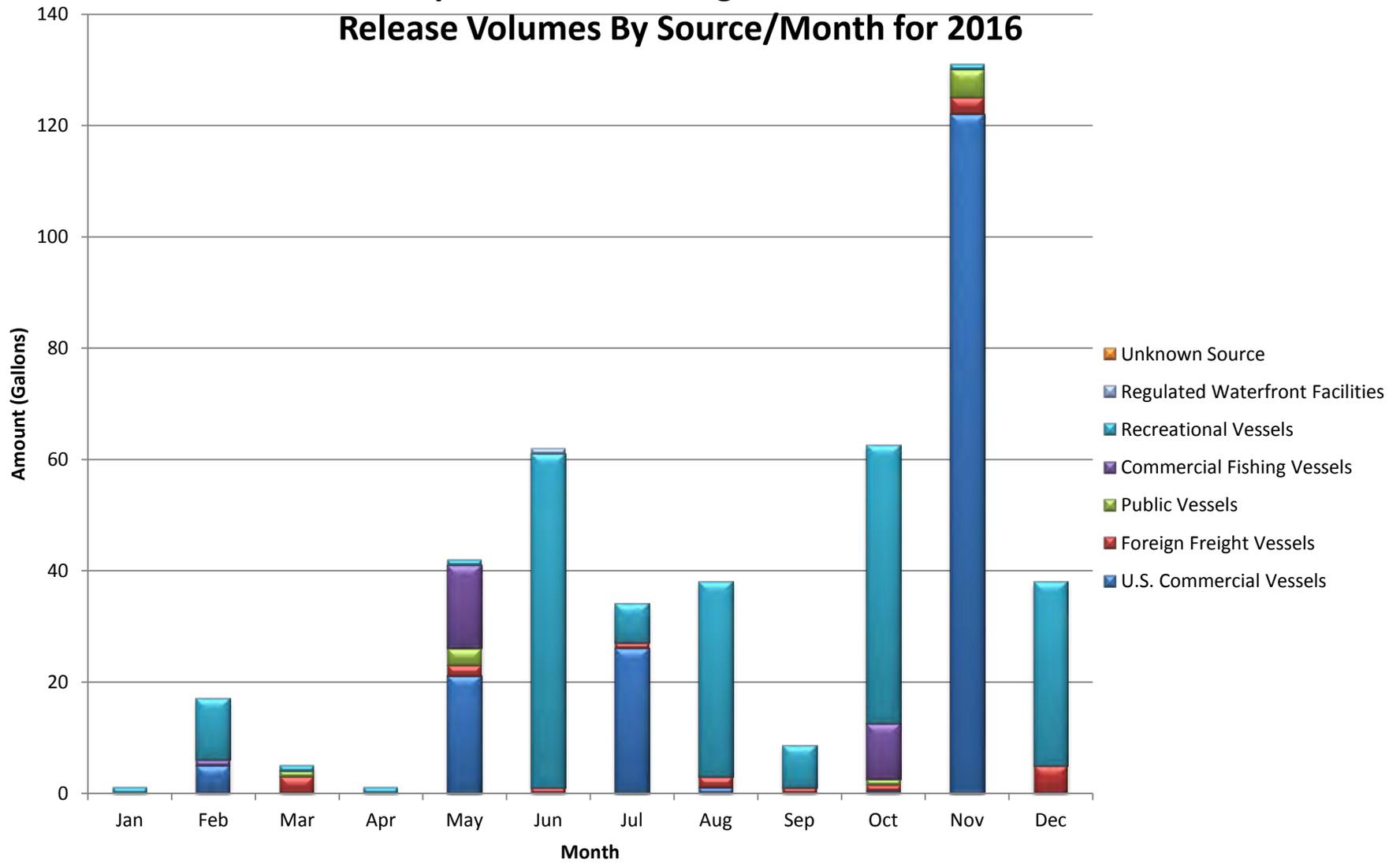


Chart 7: Total Reported Oil Discharge and/or Hazardous Material Release Volumes By Source/Month for 2016



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

**Report of the
U.S. Army Corps of Engineers, San Francisco District
May 11, 2017**

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 **early June 2017**, by government hopper.
- b. **Richmond Inner Harbor** – Estimated start **early September 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.
- d. **Oakland Harbor** – Estimated start **mid-August 2017**, estimated completion end of November 2017, by contracted clamshell.
- e. **Redwood City Harbor** – Estimated start **early September 2017**, estimated completion end of October 2017, by contracted clamshell.
- f. **San Pablo Bay (Pinole Shoal)** – Estimated start mid-June 2017, estimated completion **late-June 2017**, by Government hopper.
- g. **Suisun Bay Channel (and New York Slough)** – Estimated start **mid-September 2017**, estimated completion **mid-November 2017**, by contracted clamshell.

2. DEBRIS REMOVAL – Debris removal for April 2017 was 142.5 tons. Dillard: 104.5 tons, including 3 abandoned vessels; Raccoon: 15 tons, including 2 abandoned vessels; other boats: 23 tons, including 5 abandoned vessels. Average for April from 2007 to 2016 is 62 tons. (Range: 26-142.5 tons).

BASEYARD DEBRIS COLLECTION TOTALS:

MONTH	RACCOON	DILLARD	MISC	TOTAL
2017	TONS	TONS	TONS	TONS
JAN	30	212	170	417
FEB	75	88	35	198
MAR	65	35	12	112
APR	14	104.5	23	142.5
MAY	0	0	0	0
JUN	0	0	0	0
JUL	0	0	0	0
AUG	0	0	0	0
SEP	0	0	0	0
OCT	0	0	0	0
NOV	0	0	0	0
DEC	0	0	0	0

YR TOTAL
869.5

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:

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

The following surveys are posted:

Alameda Point Navigation Channel: Condition survey of November 2, 2016.
Berkeley Marina (Entrance Channel): Condition survey of September 23, 2014.
Islais Creek Channel: Condition survey of May 12, 2016.
Larkspur Ferry Channel: Condition survey of November 18, 2014.
Main Ship Channel: Condition survey of March 9 & 20, 2017.
Mare Island Strait: Condition survey of September 24, 2014.
Marinship Channel (Richardson Bay): Condition survey of December 6, 2016.
Napa River: Post-dredge survey of December 30, 2016.
Northship Channel: Condition survey of late July 29-31, 2015.
Oakland Entrance Channel: Post-dredge survey of September 28 & 30 and October 10, 2016.
Oakland Inner Harbor (Reach 2): Post-dredge survey of October 21 & 31, 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 (Across-the-Flats): Condition survey of September 12-14, 2014.
Petaluma River (Main Channel): Condition survey of September 13-14, 2014.
Pinole Shoal Channel: Condition survey of February 6, 2017.
Redwood City Harbor: Pre-solicitation survey of April 21-24, 2017.
Richmond Inner Harbor: Condition survey of March 14, 2017.
Richmond Inner Harbor (Santa Fe Channel): Condition survey of December 20, 2016.
Richmond Outer Harbor (Longwharf): Condition survey of April 4, 2017.
Richmond Outer Harbor (Southampton Shoal): Condition survey of April 10, 2017.
Sacramento River Deep Water Ship Channel: Condition survey of March 11-16, 2017.
San Bruno Shoal: Condition survey of March 27, 2017.
San Leandro Marina (and Channel): Condition survey of March 30 and April 1, 2015.
San Rafael (Across-the-Flats): Condition survey of May 10, 2013.
San Rafael (Creek): Condition survey of May 9, 2013.
Stockton Ship Channel: Condition survey of March 28-31 and April 1-2, 2017.
Suisun Bay Channel: Condition survey of February 16-20, 2017.
Suisun Bay Channel (Bullshead Reach): Condition survey of April 19, 2017.
Suisun Bay Channel (New York Slough): Condition survey of February 14-15, 2017.

Disposal Site Condition Surveys:

SF-08 (Main Ship Channel Disposal Site): Condition survey of March 12, 2013

SF-09 (Carquinez): Condition survey of April 19, 2017.

SF-10 (San Pablo Bay): Condition survey of April 19, 2017.

SF-11 (Alcatraz Island): Condition survey of April 11 and May 2, 2017.

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:

Before (Pre) dredge surveys are scheduled to occur thru the end of August 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 FY 2017*

HARBOR SAFETY COMMITTEE MEETING

11 MAY 2017

Project	2016			2017									FY 2018			Volume	Placement Site	Notes
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC			
	FY 2017												FY 2018					
SF Main Ship Channel						Essayons		■								350kcy	OBDS/ SF-8	Gov't Hopper
Richmond Inner Harbor	██████████			**						■	◆	◆	██████████			350kcy	SF-DODS	Clamshell
Richmond Outer Harbor										■						250kcy	SF-11	Gov't Hopper Deferred to FY18
Oakland Harbor	██████████			**									██████████			600kcy	SF-DODS	Clamshell, Option to Existing Contract
Redwood City Harbor	██████████			**						■	◆	◆	██████████			350kcy	SF-11	Clamshell
Pinole Shoal	■	ESSAYONS						ESSAYONS	■							150kcy	SF-10	Gov't Hopper
Suisun Bay Channel											◆	◆	██████████			175kcy	SF-16	Possible Emergency Dredging Sooner than Aug 2017
Napa River			██████████	**												90kcy	Upland	Dredging Completed in Dec 2017

	Ongoing Contracts			Environmental Window
	New SPN Contract			
	West Coast Hopper Contract			
	Government Dredge			

* Program execution is based on the FY17 President's Budget and Federal Standard plan for each project.
 ** Window Extension.



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

May 11, 2017

- ✎ In April the clearinghouse did not need to contact OSPR regarding any possible escort violations.
- ✎ In April the clearinghouse did not receive any notifications of vessels arriving at the Pilot Station without escort paperwork.
- ✎ The Clearinghouse contacted OSPR 1 time in 2016 about a possible escort violations. The Clearinghouse contacted OSPR 3 time 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 any 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 April there were 97 tank vessel arrivals; 12 ATB's, 4 Chemical Tankers, 14 Chemical/Oil Tankers, 25 Crude Oil Tankers, 1 LPG, 25 Product Tankers, and 16 Tugs with Barges.
- ✎ In April there were 289 total arrivals.

San Francisco Bay Clearinghouse Report For April 2017

San Francisco Bay Region Totals

	<u>2017</u>		<u>2016</u>	
Tanker arrivals to San Francisco Bay	69		59	
ATB arrivals	12		11	
Barge arrivals to San Francisco Bay	16		24	
Total Tanker and Barge Arrivals	97		94	
Tank ship movements & escorted barge movements	298		324	
Tank ship movements	170	57.05%	155	47.84%
Escorted tank ship movements	124	41.61%	95	29.32%
Unescorted tank ship movements	46	15.44%	60	18.52%
Tank barge movements	128	42.95%	169	52.16%
Escorted tank barge movements	29	9.73%	40	12.35%
Unescorted tank barge movements	99	33.22%	129	39.81%

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	193		292		0		113		598	
Unescorted movements	89	46.11%	143	48.97%	0	0.00%	50	44.25%	282	47.16%
Tank ships	66	34.20%	98	33.56%	0	0.00%	43	38.05%	207	34.62%
Tank barges	23	11.92%	45	15.41%	0	0.00%	7	6.19%	75	12.54%
Escorted movements	104	53.89%	149	51.03%	0	0.00%	63	55.75%	316	52.84%
Tank ships	93	48.19%	121	41.44%	0	0.00%	55	48.67%	269	44.98%
Tank barges	11	5.70%	28	9.59%	0	0.00%	8	7.08%	47	7.86%

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 2017

San Francisco Bay Region Totals

	<u>2017</u>		<u>2016</u>	
Tanker arrivals to San Francisco Bay	271		703	
ATB arrivals	53		114	
Barge arrivals to San Francisco Bay	51		242	
Total Tanker and Barge Arrivals	322		1,059	
Tank ship movements & escorted barge movements	1,209		3,616	
Tank ship movements	690	57.07%	2,081	57.55%
Escorted tank ship movements	526	43.51%	1,331	36.81%
Unescorted tank ship movements	164	13.56%	686	18.97%
Tank barge movements	519	42.93%	1,535	42.45%
Escorted tank barge movements	86	7.11%	554	15.32%
Unescorted tank barge movements	433	35.81%	1,129	31.22%

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	752		1,180		0		501		2,433	
Unescorted movements	334	44.41%	581	49.24%	0	0.00%	226	45.11%	1,141	46.90%
Tank ships	262	34.84%	421	35.68%	0	0.00%	194	38.72%	877	36.05%
Tank barges	72	9.57%	160	13.56%	0	0.00%	32	6.39%	264	10.85%
Escorted movements	418	55.59%	599	50.76%	0	0.00%	275	54.89%	1,292	53.10%
Tank ships	387	51.46%	515	43.64%	0	0.00%	244	48.70%	1,146	47.10%
Tank barges	31	4.12%	84	7.12%	0	0.00%	31	6.19%	146	6.00%

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.

May 2017 meeting of the San Francisco Bay Harbor Safety Committee

NOAA's Office of Coast Survey Update

NOAA invites public comment on the recently released National Charting Plan. Comments are due by midnight, June 1, 2017. The National Charting Plan is a strategy to improve NOAA nautical chart coverage, products, and distribution. It describes the evolving state of marine navigation and nautical chart production, outlines actions that will provide the customer with a suite of products that are more useful, up-to-date, and improves safety of navigation.

Additional information and the plan are available at:

<https://www.nauticalcharts.noaa.gov/staff/news/2017/nationalchartingplan.html>

The National Charting Plan discusses the discontinuation of small craft charts. In a first step of implementing the Plan, NOAA is considering discontinuing San Francisco Bay chart 18652.

<http://www.charts.noaa.gov/OnLineViewer/18652.shtml>

Chart 18652, "San Francisco Bay to Antioch", is a small craft folio chart that has 18 panels and insets. All of these panels and insets, but one, have coverage of the same or larger scale on other NOAA conventional charts. For example, San Pablo Bay is on Page C of chart 18652 at a scale of 1:80k. However, San Pablo Bay is also on raster Chart 18654 at a scale of 1:40k. (The one exception is the Coyote Point Harbor inset, portrayed at 1:20k scale on Inset 3, Page A of chart 18652 and at 1:40k scale on chart 18651.)

NOAA is recommending discontinuing chart 18652 and its 18 panels and insets to provide the best available coverage to the mariner, while reducing the amount of data and product redundancy, which will increase efficiency in data source application.

Please contact Jeffrey Ferguson, Coast Survey's California Navigation manager at jeffrey.ferguson@noaa.gov if you have any questions, comments or concerns.



CALIFORNIA STATE LANDS COMMISSION

HARBOR SAFETY COMMITTEE MONTHLY REPORT - APRIL COMPARISON

VESSEL TRANSFERS

	Total Transfers	Total Vessels Monitored	Total Transfers Percentage
APRIL 1 - 30, 2016	218	114	52.29
APRIL 1 - 30, 2017	211	93	44.08

CRUDE OIL / PRODUCT TOTALS

	Crude Oil (D)	Crude Oil (L)	Overall Product (D)	Overall Product (L)	GRAND TOTAL
APRIL 1 - 30, 2016	13,616,141	0	18,569,767	7,329,993	25,899,760
APRIL 1 - 30, 2017	13,889,600	315,000	17,864,870	7,441,386	25,306,256

OIL SPILL TOTAL

	TERMINAL	VESSEL	Total	Gallons Spilled
APRIL 1 - 30, 2016	0	0	0	0
APRIL 1 - 30, 2017	0	0	0	0

Disclaimer:

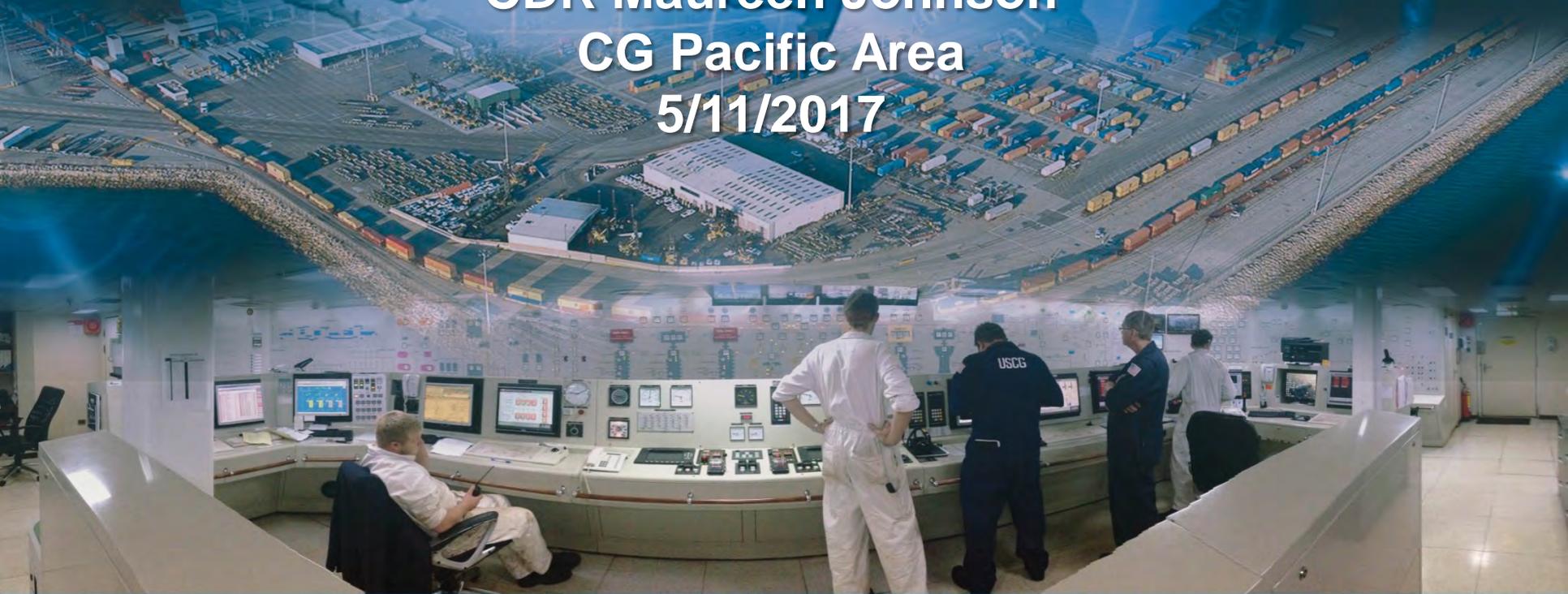
Please understand that the data is provided to the California State Lands Commission from a variety of sources; the Commission cannot guarantee the validity of the data provided to it.



THE UNITED STATES COAST GUARD

CYBER RISK MANAGEMENT IN THE MARITIME TRANSPORTATION SYSTEM

CDR Maureen Johnson
CG Pacific Area
5/11/2017

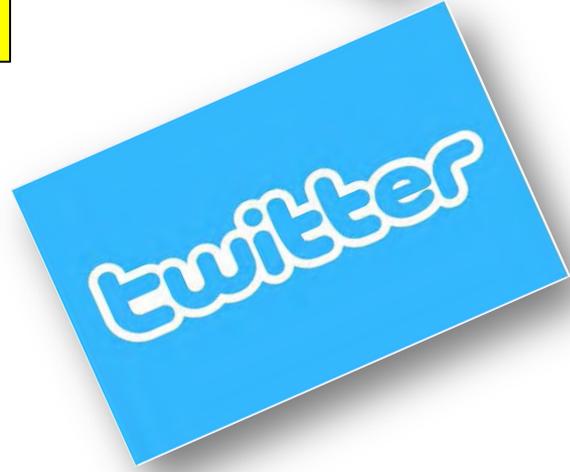


Today's Reality



The CG and the MTS ARE NOT EXCEPTIONS

Bank of America



Homeland Security



Potential Range and Impacts of Exploiting Cyber in MTS

- Direct physical damage
- Local MTS disruptions
- Injury or death
- Catastrophic disruptions to the MTS



Quote from Rear Admiral Paul Thomas, Assistant Commandant for Prevention Policy

“THERE WERE QUESTIONS FROM THE AUDIENCE ABOUT TIMELINES AND INCENTIVES THAT I’D LIKE TO ADDRESS. THE COAST GUARD JUST RECENTLY CONDUCTED A STUDY ABOUT THE COST BURDEN TO INDUSTRY OF ALL THE REGULATIONS THAT WE HAVE PUBLISHED SINCE 1973. WE FOUND THAT 88% OF THE ENTIRE COST BURDENS OF ALL REGULATIONS, OVER ALL THOSE YEARS, WERE DUE TO TWO REGULATIONS, OPA 90 AND MTSA. BOTH OF THESE REGULATIONS FOLLOWED PREDICTABLE DISASTERS. THE LESSON LEARNED SHOULD BE THAT WE SHOULD NOT WAIT FOR AN INCIDENT TO OCCUR THAT WILL MAKE US MOVE FORWARD ON REACTIVE, MORE EXPENSIVE, REGULATIONS; WE NEED TO BE PROACTIVE IN APPROACHING THIS. WE ARE HERE TO HAVE A DISCUSSION WITH INDUSTRY SO WE CAN DEVELOP A STANDARD TOGETHER, ONE THAT WORKS AND IS REASONABLE IN TERMS OF THE COST BENEFIT. IF WE WAIT UNTIL AN INCIDENT OCCURS, THAT OPPORTUNITY GOES AWAY.”

[HTTPS://WWW.YOUTUBE.COM/WATCH?V=RZOVc1ZOUVY&FEATURE=EMBEDDED#T=9568](https://www.youtube.com/watch?v=RZOVc1ZOUVY&feature=embedded#t=9568)



Homeland
Security



Examples – Get to the WHY



WiFi Devices

Recent studies have shown major vulnerabilities in 20% of identified control system networks

- Digital surveillance networks also have vulnerabilities

Powerful WiFi devices detected on foreign flag ships

- Many antennas have a range of several miles
- Several antennas connected to computers running password cracking software



Имя	Bssid	Ключей проверено	ivs получено	Обнаруженные ESSID	Сети	Interfaces
NGBYD	00:40:96:56:F3:06	166431740	130030	4267480.51	N/A	

```

Сообщение:
Opening /home/snowleopard/Programs/WepCrack/captures/00:40:96:56:F3:06-01.cap
Reading packets, please wait...
Read 2990583 packets.
# BSSID      ESSID      Encryption
1 00:40:96:56:F3:06 <length: 5> WEP (130030 IVs)
Choosing first network as target.
Opening /home/snowleopard/Programs/WepCrack/captures/00:40:96:56:F3:06-01.cap
Reading packets, please wait...
Attack will be restarted every 5000 captured ivs.
Starting PTW attack with 129957 ivs.
Attack failed. Possible reasons:
- Out of luck: you must capture more IVs. Usually, 104-bit WEP
  can be cracked with about 80,000 IVs, sometimes more.
- Try to raise the fudge factor (-f).
Opening /home/snowleopard/Programs/WepCrack/captures/00:40:96:56:F3:06-01.cap
Reading packets, please wait...
Read 2990583 packets.
# BSSID      ESSID      Encryption
1 00:40:96:56:F3:06 <length: 5> WEP (130030 IVs)
Choosing first network as target.
Opening /home/snowleopard/Programs/WepCrack/captures/00:40:96:56:F3:06-01.cap
Reading packets, please wait...
Attack will be restarted every 5000 captured ivs.
Starting PTW attack with 129957 ivs.
Attack failed. Possible reasons:
- Out of luck: you must capture more IVs. Usually, 104-bit WEP
  can be cracked with about 80,000 IVs, sometimes more.
- Try to raise the fudge factor (-f).
  
```



GPS Spoofing

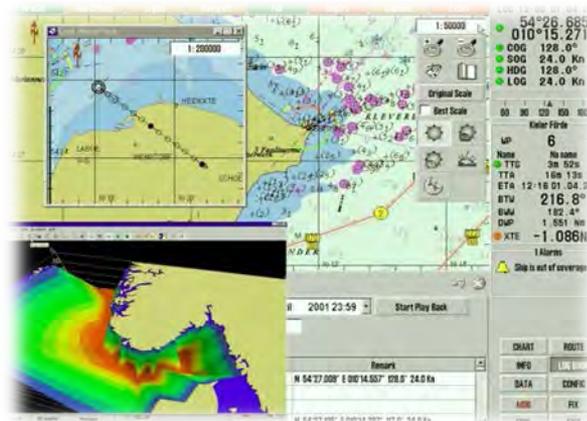
- University of Texas at Austin proof of concept
- Attacker transmitted spoofed GPS signal
- Signal overrode civilian GPS
- No alarms
- Attacker influenced signal
- Master changed course based on erroneous data



ECDIS Vulnerabilities

Electronic Chart Display and Information System (ECDIS)

- Used for ship navigation
- Interconnected with numerous shipboard systems and sensors (AIS, NAVTEX, Speed Log, fathometer)
- Chart updates loaded via internet or CD/USB



Source: CyberKeel 15 October 2014

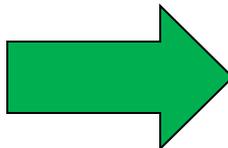


Homeland
Security

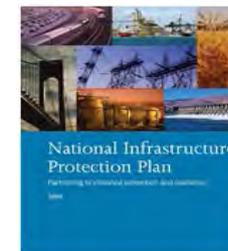
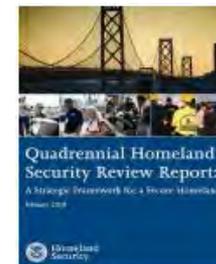
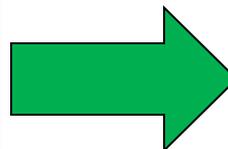


Policies, Directives and Mandates

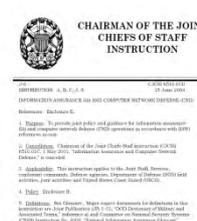
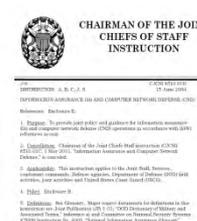
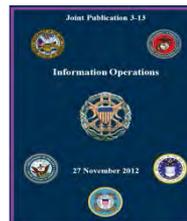
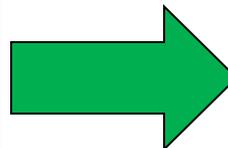
Presidential / National Policy



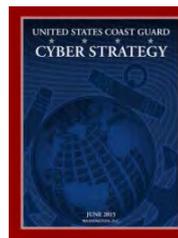
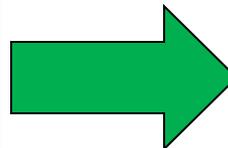
DHS Policies / Directives



DOD Policies / Directives



CG Policies / Directives



Homeland Security



USCG Authority & Jurisdiction

- All existing authorities (i.e. COTP, OCMI, SMC, FOSC, FMSC) remain the same – agnostic to type of risk
- Cyber is another operational domain
- Cyber is additional risk factor we must take into account when ensuring a safe and secure marine transportation system



What Makes Cyber Risk Special?

**Vulnerability
increases with
every new device**

Threat is unlimited

**Likelihood of an
incident is near
certain**

**Detection is a
factor**



**rapidly growing portion of our
total risk exposure**



Homeland
Security



Threat Actors



Homeland
Security



It's the Simple Things - Countermeasures

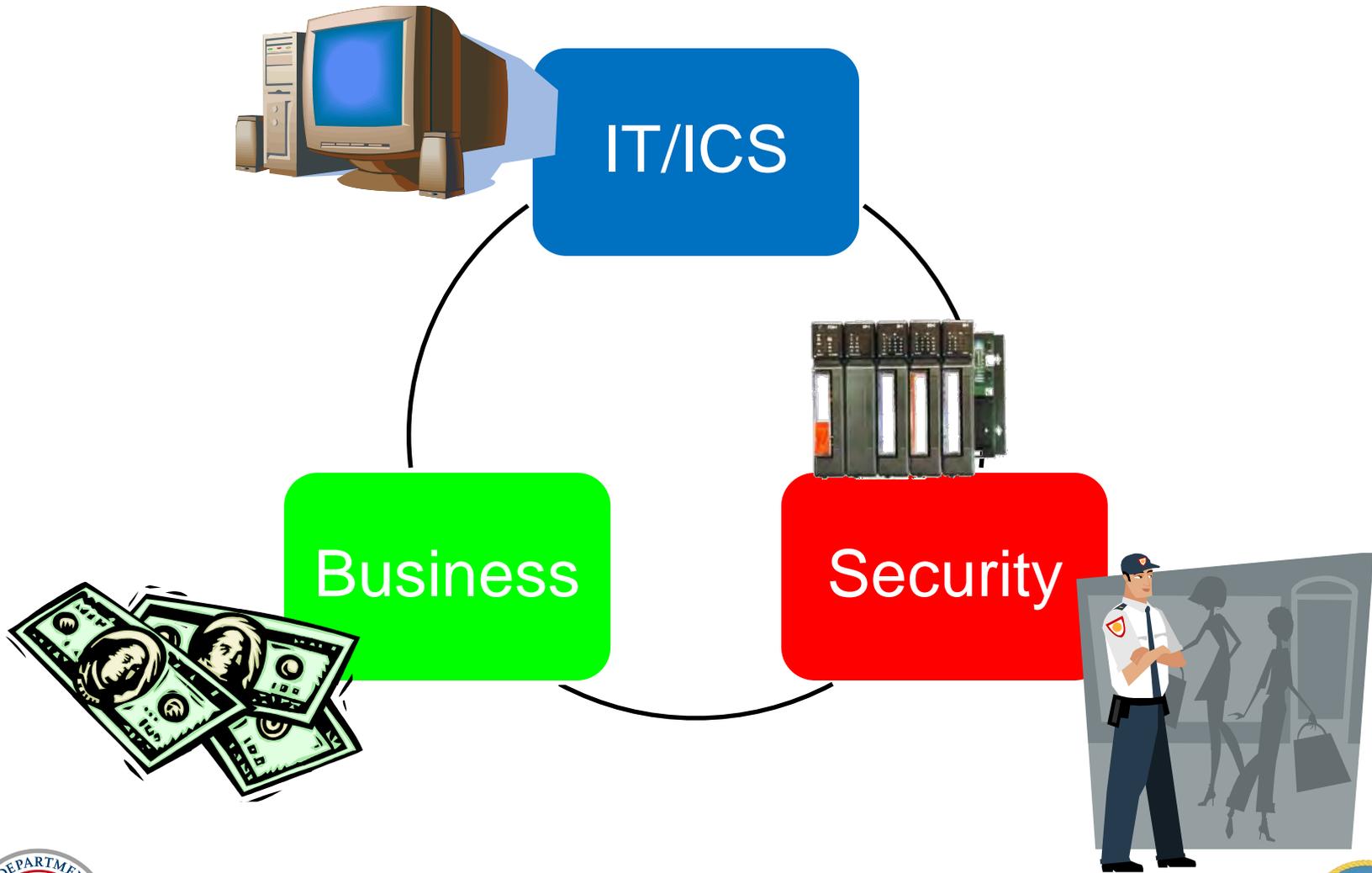
- Updated anti-virus, intrusion detection
- Software patches
- Change default passwords/rotate user passwords
- Educate and train your workforce
- Separate business and production systems
- Eliminate unnecessary data
- Study the threat landscape



“Some organizations will be a target regardless of what they do, but most become a target because of what they do.”



WORKING TOGETHER



DHS Overview

National Cybersecurity & Communications Integration Center
(**NCCIC**)



Industrial Control Systems Cyber Emergency Response Team (ICS-CERT)

- Responds to and analyzing control systems-related incidents;
- Conducts vulnerability, malware, and digital media analysis;
- Provides onsite incident response services;
- Provides situational awareness/actionable intelligence;
- Coordinates the responsible disclosure of vulnerabilities and mitigations; and
- Shares vulnerability information and threat analysis through alerts/advisories.

For more info, see <https://ics-cert.us-cert.gov/>



CYBER SECURITY EVALUATION TOOL (CSET)

- Desktop software tool
 - developed by DHS
 - Industry self-assessment of their own networks against recognized standards, guidelines and practices
- Provides a prioritized list of recommendations aimed at improving the organization's cybersecurity
- Identifies what to do to achieve the desired level of security



Recent Initiatives

- Clarify notification procedures
 - NCCIC: 888-282-0870
- NVIC



QUESTIONS?

