



San Pedro Bay Ports Sustainable Supply Chain Advisory Committee *January Meeting Summary*

Date: January 26th, 2022 | 11:00 am – 3:00 pm

Location: Via phone conference

Attachments: Attachment A - Attendees
Attachment B - Meeting Agenda
Attachment C - Presentation - Committee Meeting

Meeting Summary

1. Review & Approve November Meeting Summary
 - a. ILWU and HTA proposed three corrections for accuracy, and the minutes were subsequently approved. These were:
 - i. Correcting the acreage allocated for the workforce training campus, from 10 acres to 30 acres.
 - ii. Clarifying the ILWU's position on research underway by CSULB regarding automation at port terminals.
 - iii. Clarifying the role of dealerships in driver and fleet training.
2. Port Opening Remarks
 - a. The joint ports shared that they are actively coordinating with a Biden-Harris task force to address ongoing congestion but that significant improvements were made in late 2021. Container dwell time has dropped 68% since the ports announced a new fee, which has accordingly been delayed until January 28th. At sea, the number of anchored or loitering vessels was under 10 as of January 22nd, 2022, following the introduction of a just-in-time vessel management program introduced by the Pacific Maritime Association (PMA) in mid-November.
 - b. The SPBP recorded a record year with over 19 million TEUs of cargo in 2021. Simultaneously, the number of container ship calls declined during the same period. This is partly due to the increasing size of container vessels in the goods movement industry. The ports said that they are actively developing plans to leverage available land for cargo storage and processing and noted that the growth in demand is approaching a point that may not be unique during the global COVID-19 pandemic but is instead a new normal.
 - c. Addressing their environmental programs, the ports continue to work towards a 4/1/2022 start date for implementation of the fee collection as part of the Clean Truck Program. They are currently working with service provider PortCheck to develop the rate collection mechanism which they will subsequently workshop with system users. Also this spring, the ports intend to release their draft technical feasibility studies for drayage trucks and cargo handling equipment for public comment. Meanwhile, low- and



zero- emission (ZE) technology demonstration projects continue; an estimated 200 pieces of ZE equipment will be tested in 2022 within the port complex.

3. Review & Approve Draft Recommendations

a. Drayage Truck Infrastructure Standards

- i. GNA noted that this was approved at the prior Committee meeting but that the Teamsters, a committee member, had not been present at the time and had not yet responded to requests for approval. Committee members observed that delays due to absence were obstructing the Committee’s core work during a dynamic period for the ports’ CAAP. The members also emphasized that efficient and meaningful action is important during periods when significant funds are becoming available, such as the present. The members requested that a process be defined to avoid delays associated with unresponsive or inactive members and protect the Committee’s core operations. *GNA is working with the ports to define a solution.*
- ii. HTA proposed one edit to explicitly state that infrastructure investments are needed for both public and private fueling facilities, and that these facilities will support heavy-duty vehicles. *This proposal was accepted and GNA took the action to update the recommendation and to secure final member approval.*
- iii. Jacob Haik reminded the group that LADWP had previously developed a report about electricity capacity and future growth requirements, which may prove valuable. EarthJustice added that it would be useful to understand the gaps in regional planning and options to accelerate solutions. GNA and the POLA noted that there are ongoing discussions and awarded projects addressing this, however implementation of these various HD ZE infrastructure studies will take several years to complete, thus leaving a timing issue with regard to more near term infrastructure development goals.
 - The Ports proposed a future topic of strategy and funding advocacy. *GNA confirmed that this would be a core part of the March agenda.*
- iv. Addressing the topic of ZE drayage truck procurement generally, member HTA noted that its drivers are seeking guidance on upcoming regulations in order to plan their funding advocacy and applications. HTA asked CARB whether it has updates on its plans to regulate vehicle and infrastructure procurements.
 - CARB reported that it does not expect to have significant changes to the drayage component of its Advanced Clean Fleet (ACF) regulation, which is in rulemaking this year, by the Committee’s March meeting. However, it has been told repeatedly by its board that the fundamentals of the current drayage truck regulatory language will remain as-is, but also, that the agency has nearly a year’s worth of rulemaking and expects to receive inputs through various workgroups.
 - HTA expressed continued frustration at the lack of progress on HD ZE infrastructure development to support the implementation of the ACF drayage truck rule. Likewise, EarthJustice noted similar frustrations given the 2017 Executive Order from the two mayors and the significant amount of funding that is available to support HD ZEV infrastructure



development including a LCFS funding program for HD ZE drayage trucks proposed by SCE and pending CPUC approval.

- PMSA added that data recently obtained from the POLA shows that the turnover of new trucks registered in the Port Drayage Truck Registry (PDTR) was higher in 2021 than in 2020 and is four times (4x) higher than the 5% attrition rate that CARB most recently used in its ACF calculations. This points to the possibility that there will be a distinct truck shortage in the coming years, particularly if new truck registrations are limited to ZEVs after November 2023, and that this will create further issues within the goods movement supply chain if the ports' cargo volumes continue to increase. CARB responded that it is incorporating measures into the rule to avoid problematic attrition and proposed that it meet separately with PMSA and HTA to discuss what data could inform a revised assumption.
- v. GNA inquired whether innovative financing measures are being addressed in the ACF rulemaking. CARB agreed to bring its team in to a future meeting to address that question.
- b. Utility Use of LCFS Holdback Funds
 - i. GNA noted that this was approved at the prior Committee meeting but that the Teamsters, a committee member, had not been present at the time and had not yet responded to requests for approval. GNA will work to secure final member approval.
- c. AHJ Permitting Efficiency & Responsiveness
 - i. ILWU shared that it's leadership recently expressed concerns about new technologies in a letter to Governor Newsom and requested that "no funds are used to operate any equipment not operated by a human or put in place infrastructure that would support automated equipment and eliminate jobs." As a result, the ILWU is not currently supporting efforts that do not explicitly state that the outcome will not include automated equipment, especially in marine terminals. Although the ILWU supports the environmental goals of a ZE transition, it cannot support infrastructure that could lead to workforce reductions. Accordingly, it cannot support the recommendation as written, but invited members to meet with its leadership separately to discuss alternative language. Several members of the SSCAC accepted the invitation.
 - ii. Responding to the ILWU's comments, EarthJustice pointed out that the recommendation advocates for jobs and training and encouraged the members to use these discussions to productively move towards action, and to avoid recurring barriers. EarthJustice stressed that the SSCAC is expected to act as a positive catalyzing force for the CAAP goals. GNA added that the ILWU is invited and encouraged to present recommendations to the SSCAC that it can consider supporting.
 - iii. GNA agreed to work with ILWU to facilitate a meeting among interested SSCAC members in the near term.

4. Priorities & Activities

- a. SSCAC Members



i. Vessel Queuing System (PMSA)

- Kip Louttit of Marine Exchange – Southern California presented on the new vessel management strategy being implemented in California ports to reduce congestion and associated emissions (**Attachment C**). Branches of the Marine Exchange in SoCal, the Bay Area, and Alaska partnered with PMA, PMSA, and approximately 10 carriers and terminals to update the 100-year old marine vessel traffic strategy of queuing vessels for berth based on their arrival time at a port's breakwater. The new system uses modern day communications technology to queue vessels based on their departure time and location from their last port of call. By providing vessels with advance notice of a destination port's congestion and their likely time to unload, the system removes the incentive to "race" across the ocean. This has two positive effects: vessels consume less fuel during transit (and therefore have lower emissions), and they arrive on a predictable schedule for which on-shore facilities and labor have time to prepare handling resources and schedules. The new system also removes the risk that at-anchor or loitering vessels will interfere with water zones that are meaningful to the department of defense, and strategically reduces the amount of emissions close to shore. Safety & Air Quality Areas (SAQAs) were defined to provide commercial vessels with designated areas for anchoring or loitering; the methodology was based on that used to manage oil tanker traffic.
 - The program was introduced in the SPBP complex in mid-November 2021, and at the Port of Oakland in mid-January 2022. It is considered a success - on January, it recorded a record low of two vessels loitering or at anchor in the SPBP complex. The program is voluntary, yet compliance rates are high because ships experience lower fuel costs and more predictable business costs, improving their own scheduling. Going forward, the program aims to maintain an at-anchor vessel population of 35 or less and reduce the loitering vessel population to zero.
 - Committee members asked whether air quality measurements had been taken during the implementation period, and the ports and PMSA shared that they have not had the opportunity to collaborate on this due to the rapid roll-out under emergency conditions but hope to do so soon.
 - CARB observed that this program, and associated research, will be valuable as the agency goes through its interim update to the at-berth rule this year. It intends to complete its modeling exercise by the end of 2022.
 - PMSA added that this program is not intended to create a new normal, and that the industry hopes to move back to a just-in-time vessel management model. Industry conditions will determine if and when this is achievable.
- ii. GridAlternatives shared that it is expanding its services to include EV charging installations in affordable multi-family housing facilities and is participating in



the new Research Hub for Electric Technologies and Truck Applications (RHETTA). It will support the development, validation and acceleration of strategic efforts to electrify key freight corridors, beginning in early March. GridAlternatives invited members to share names and contacts of possible partners at any point.

- iii. No other updates were reported by SSCAC members.

5. Stakeholder Priorities & Activities

a. Ports

i. Progress against SSCAC Recommendations

- Port staff presented a summary of its work to address the SSCAC's recommendations since the Committee's inception. These details are available in **Attachment C**. Responding to questions about projects that have or will soon be closed, the ports clarified that most equipment will remain in operation at the ports even after the demonstration period. Final project reports are posted on the ports' respective websites and port staff can share them with the Committee as well.
- *Recommendation - ZE Top Handlers*: Speaking to the Top Handler demonstrations, POLB noted that labor responses were positive but that the equipment's performance varied according to the terminal. Terminals operate different kinds of duty cycles, and in one case, SSA terminal's duty cycle was too intensive for the equipment to be able to complete two shifts of operation on a single battery charge. However, at the LBCT terminal, the unit could operate for multiple days before requiring a re-charge given the much lighter duty cycle at this terminal. SSA remained interested in finding an application for the equipment and will begin operating it at its Oakland facility in February 2022, where the duty cycles are less intense than in SoCal.
 - a. PMSA noted that it is important for equipment to be tested in the heaviest applications and across all terminal applications. POLB responded in agreement and clarified that the request was made by SSA which considers that a third duty cycle context may provide valuable information about the equipment's real limits. SSA is also exploring fuel cell technologies to gather as much information as possible for its procurement planning. It is hoped that a fuel cell demonstration can be initiated sometime soon.
- *Recommendations - ZE Drayage Trucks & Clean Trucks Program Acceleration*: The Clean Truck Program fund spending plan is currently under development and the ports confirmed that it will be used to support vehicles and infrastructure. The ports are also releasing a Request for Information (RFI) on public charging equipment and infrastructure in the first week of February. The goal of this RFI is to understand operator requirements to install EVSE on their terminals.
 - a. Regarding the soft cap on new truck registration that currently exists in the CAAP, the ports noted that the rule CARB is



considering to limit new truck registrations beginning in November 2023 to ZE technologies would trump the CAAP.

Therefore, the ports have adopted a wait-and-see approach.

- *Recommendation - POLA-LADWP Committee:* Responding to the members' inquiries about discussions between the ports and utilities for capacity planning, both ports noted that they regularly connect with their respective electric utilities. POLB is preparing a power systems resiliency assessment to inform a future demand forecast based on recent data. This will enable the port to identify near-term upgrade priorities, such as adding a substation. Staff from the LA Mayor's office noted that city teams are supporting scenario planning as well, and that they hope some impactful, "big scenario" decisions will be made in the next one to two years.
- *Recommendation - System Efficiency - HPEC:* Although the HPEC project was discontinued, POLA noted that it is currently proposing a new project to use the former LAXT site for container storage. POLB is similar looking at options to expand its facilities to manage growing cargo volumes. The Ports noted that the supply chain crisis is an example of what a similar recommendation, for System of Systems, was designed to address. POLB noted that a case study may be valuable here once the current crisis is considered resolved.
- *Recommendation - Multi-Port Clean Tech Requests for Information:* Port boards are currently reviewing project proposals that were developed from a 2020/2021 RFI.
- *Recommendation - POLA LED Light Conversion:* Both ports have active lighting replacement projects and expect to complete this work over the next calendar year. The POLB noted that since its program began, the technology has improved and lease requirements have been adjusted to ensure that this energy efficiency measure is widely adopted across port operating parties.
- *Recommendation - Cargo Handling Equipment:* The ports are currently operating nearly 100 pieces of ZEV equipment on site with support from state agencies. Additionally, the second CHE technical feasibility assessment is due out in spring 2022.
- *Recommendation - Clean Truck Program Acceleration 2.0:* As previously noted during the meeting, this program will launch in early April and terms of the fund's spending plan are in development. The ports added that the soft ban originally proposed is under discussion due to its interaction with a very similar proposed state regulation.
- *Recommendation - Prioritize Funding for Clean Technology Deployment at the San Pedro Bay Port Complex:* The ports have received \$157MM over the "last few years" in support of technology demonstrations, fueling/charging infrastructure assessments, and system efficiency improvements. The ports are actively pursuing federal funding, as well.
- *Recommendation - Increase Use of On-Dock and Low Emissions Locomotives:* The ports are operating and/or waiting for approval on



several projects. They will invest over \$1 billion in projects to expand rail capacity.

- *Recommendation - Systems of Systems:* The POLB noted that this is especially relevant in light of the COVID-19 pandemic and associated supply chain crisis. The federal attention to and funding for this issue released in 2021, and the measures that the ports have introduced in late 2021 and continue to develop in 2022, are achieving meaningful traction for this recommendation.
 - *Recommendation - Funding & Resource Prioritization:* The Ports reported that they are assessing cost effectiveness for emissions reductions of various technologies and strategies, noting that shore power reductions are a priority. The results of this study will inform terminal equipment demonstrations.
 - *Recommendation - Fueling Infrastructure:* Both ports are conducting studies and engaging stakeholders to maintain updated forecasts on their fueling infrastructure needs. Additionally, the technical feasibility assessments due out this year will address ZEV infrastructure.
 - *Recommendation - Harbor Craft:* The Ports continue to operate several demonstrations. Addressing Harbor Craft, POLA noted that a recent proposal by Crowley for funding to develop a ZE tug was not awarded, and so the ports are supporting the project in discussions with the South Coast AQMD to consider alternative options. Funding for this technology is challenging because a single unit's development is very expensive, and the equipment is operated in multiple locations rather than for one terminal.
- ii. State & Federal Funding Strategy (Letters of Support for POLA/POLB)
- Policy teams from each port outlined the federal and state funding resources that are available to the SPBP complex and the projects for which the ports have received approval to fund and implement in 2022. The ports noted that billions are becoming available for transportation and goods movement in the state, and that while this is not all available for port and freight operations the SPBPs are working to ensure that they receive their fair share. To help manage the funding flow, the California Secretaries of Transportation and Agriculture (CALSTA) are convening a working group to develop a holistic funding application.
 - The POLB presented three support requests to the members:
 - a. Support the amounts that the ports have proposed to the Governor as necessary to move projects forward;
 - b. Support the request that a "significant portion" of the \$1.2Bn dedicated to port freight infrastructure be allocated to the SPBP, based on the share of the nation's cargo volume that is processed through these gates;
 - c. Support the ports' request for state funding on new projects, such as an 80-acre cargo handling facility.
 - The POLA added that Committee support for the proposed workforce training center would be valuable as well.



The ports advised that state funds have produced positive results by the SPBPs to date, and that this is a valuable point for the Committee to communicate.

- The Ports added that SSCAC support for Senator Barragan’s bill would be in-line with the above asks, and meaningful to legislators.
- GNA agreed to draft letters of support for the four specific asks from the ports and circulate them among the members for review and approval. The ports advised that a letter of support for the state budget is a priority in the near term.

b. CARB

i. Low NOx Omnibus is now law

- CARB shared that this rule is now effective in California as it was approved by the OAL at the end of December 2021.

ii. eTRU

- The agency is currently addressing board comments received in September 2021, including stakeholder outreach on funding incentives. The draft amendment for this rule includes a requirement that ZE eTRUs begin phasing out in 2023, with a goal of a 100% ZE eTRU fleet in California by 2029.
- Other changes under consideration include: low-global warming potential refrigerant requirements; out-of-state fleet reporting requirements; reduced facility fees (from \$54/facility to \$40); and warranty requirements. The rule will be presented to the board for final consideration in February 2022.

iii. CHE

- There were no significant updates on this rule presented in the SSCAC meeting.

iv. HD I/M

- Agency responses to the 15-day comments are currently being prepared and will be published in March. Among comments addressed are special cargo exceptions.
- The agency is also working to involve the ports and terminals in designing the database through which inspection & maintenance will be tracked so that it aligns with the variety of unique tagging systems already in use. An RFP will be published for service providers at some point in 2022.

6. Committee Focus in 2022

a. Review draft meeting schedule (agenda & guests)

- March: CTP Implementation & ZE Infrastructure
- May: Marine Vessels - 2021 activity & technology opportunity
- July: Increased Efficiency & On-dock Rail
- September: Workforce development
- November: ZE Trucks & CHE implementation

7. Conclusion & Next Steps



- a. GNA reminded the members of the 2022 agenda and reiterated the standing invitation for members to participate in agenda development.



Attachment A
List of Meeting Participants

SSCAC Committee Members	
Marnie Primmer	FuturePorts
Michele Grubbs	PMSA
Thomas Jelenic	PMSA
Matt Miyasato	South Coast AQMD
Heather Arias	CARB
Chris Chavez	CCA
Stella Ursua	Grid Alternatives
Ray Familathe	ILWU-13
Adrian Martinez	EarthJustice
Louis Dominguez	San Pedro Neighborhood Association
Matt Schrap	Harbor Trucking Association
Los Angeles Port & City Staff	
Teresa Pisano	Port of Los Angeles
Chris Cannon	Port of Los Angeles
Tim DeMoss	Port of Los Angeles
David Libatique	Port of Los Angeles
Erick Martell	Port of Los Angeles
Max Reyes	Mayor Eric Garcetti's Office
Lauren Faber O'Connor	Mayor Eric Garcetti's Office
Michael Samulon	Mayor Eric Garcetti's Office
David Ou	Mayor Eric Garcetti's Office
Long Beach Port & City Staff	
Heather Tomley	Port of Long Beach
Rick Cameron	Port of Long Beach
Eleanor Torres	Port of Long Beach
Wei Chi	Port of Long Beach
Sam Joublat	Port of Long Beach
Rose Szoke	Port of Long Beach
Meeting Facilitation Staff	
Erik Neandross	GNA
Eleanor Johnstone	GNA
Patrick Couch	GNA
Christopher Davis	GNA
Other Stakeholders	



Jacob Haik	Councilman Joe Buscaino's Office
Lea Yamashita	CARB
Kim Heroy-Rogalski	CARB
Kip Louttit	Marine Exchange - Southern California
Regina Hsu	EarthJustice



Attachment B

Meeting Agenda

1. Review & Approve November Meeting Summary
2. Port Opening Remarks
3. Review & Approve Draft Recommendations
 - a. Drayage Truck Infrastructure Standards
 - b. Utility Use of LCFS Holdback Funds
 - c. AHJ Permitting Efficiency & Responsiveness
4. Priorities & Activities
 - a. SSCAC Members
 - i. Vessel Queuing System (PMSA)
5. Stakeholder Priorities & Activities
 - a. Ports
 - i. Progress against SSCAC Recommendations
 - ii. State & Federal Funding Strategy (Letters of support for POLA/POLB)
 - b. CARB
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 - iv. September: Workforce development
 - v. November: ZE Trucks & CHE Implementation
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Attachment C
Presentation - Committee Meeting

San Pedro Bay Ports

Sustainable Supply Chain Advisory Committee Meeting

January 26th, 2022



Agenda

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 - v. November: ZE Trucks & CHE implementation
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2. Port Opening Remarks



3. Review & Approve Draft Recommendations

- a. Drayage Truck Infrastructure Standards
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4. Priorities & Activities

- a. SSCAC Members

- a. Vessel Queuing System (PMSA)

Marine Exchange of Southern California and Vessel Traffic Service of Los Angeles & Long Beach



Information brief to
**Sustainable Supply
Chain Advisory
Committee
Bi-Monthly Meeting**

**New Queuing System
for Labor for Container
Ships arriving LA/LB**

***Safe, Secure, Efficient, Reliable &
Environmentally Sound Maritime Transportation***

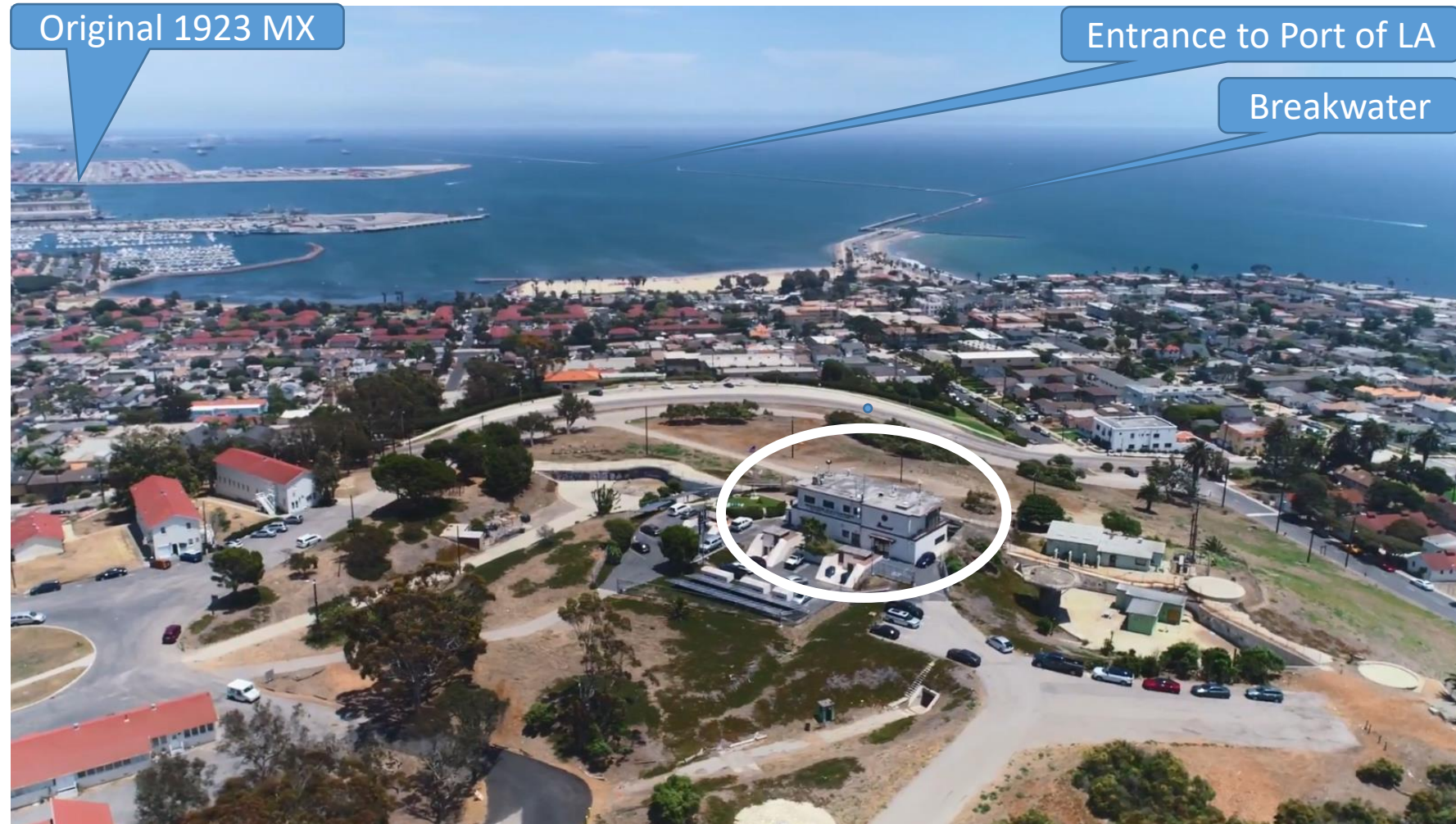
Version 2

25 January 2022

Providing Maritime Peace of Mind Since 1923

Agenda

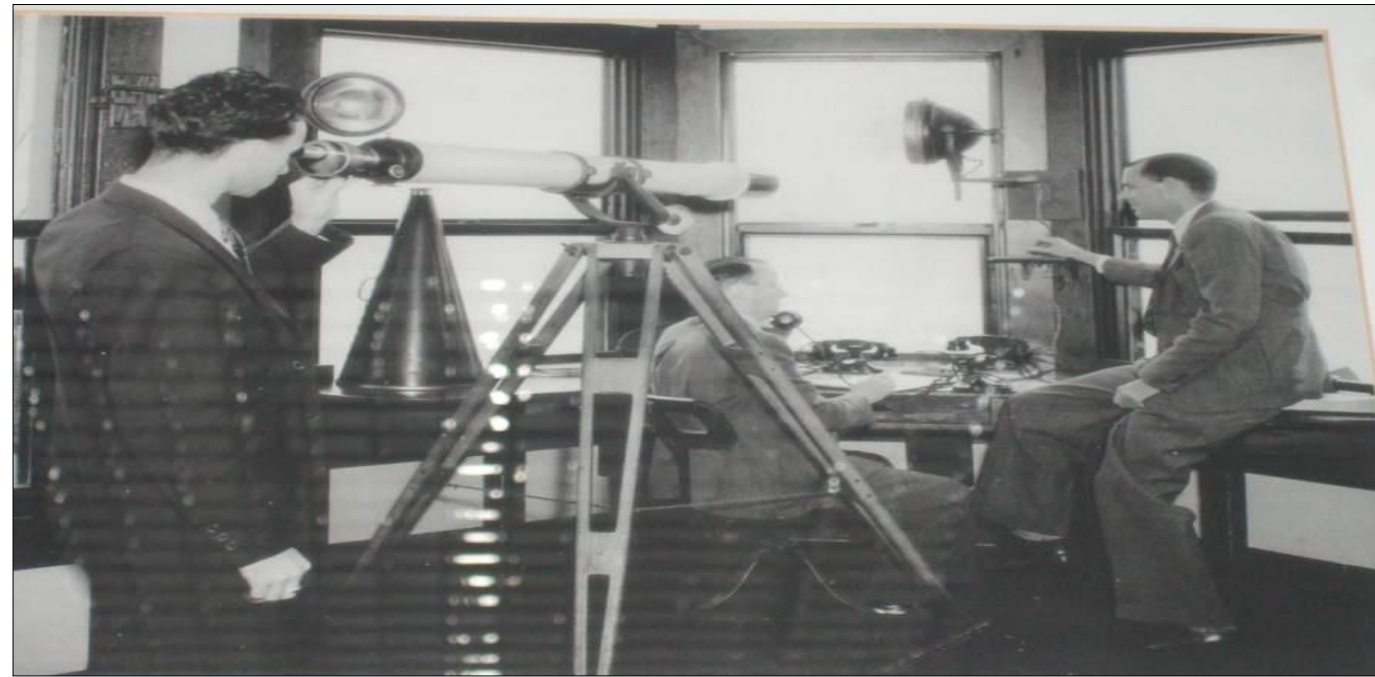
- Marine Exchange
- Maritime Information Service
- Vessel Traffic Service
- Backup Situation
- New Queuing System for Labor for Container Ships arriving LA/LB
- End



Marine Exchange and approaches to Los Angeles & Long Beach Harbors

MX SoCAL: 1923 to 2022

99 years of changing functions, processes, and technology to meet needs of customers and ports.

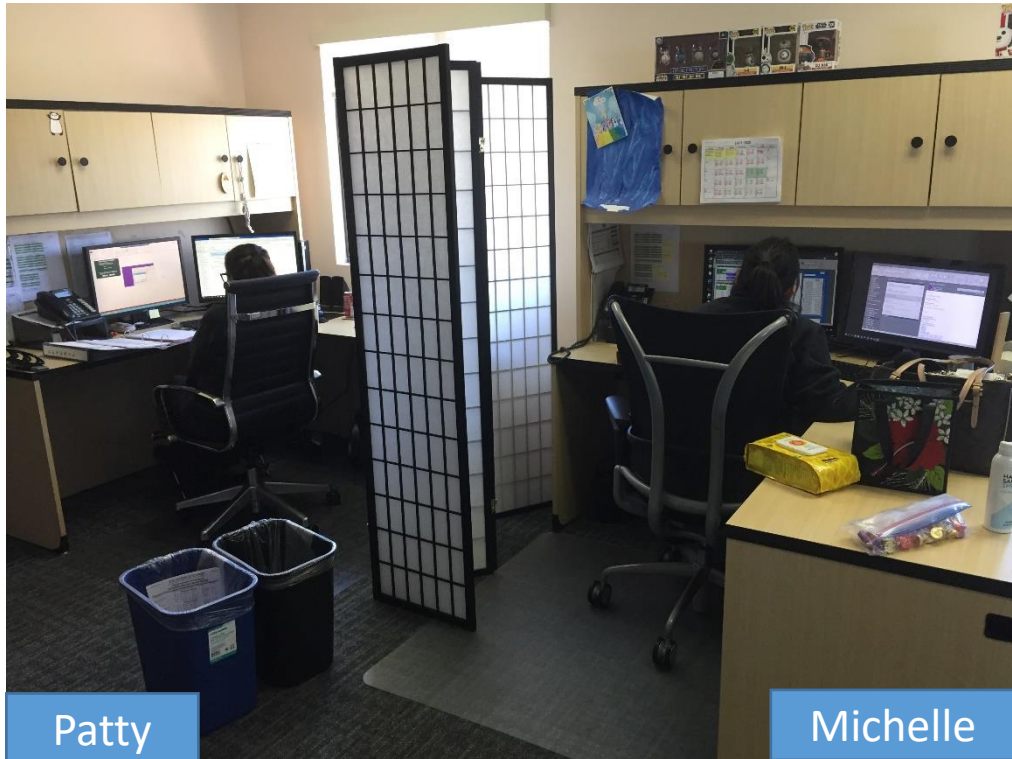


Telescopes, flashing light & megaphones & blackboards replaced by state of market technology! 3

What we do – 2 main business lines

Maritime Information Service

- 1923 to present
- Gather and collate schedules for ~4,550 vessels per year arriving, departing & moving around ports of LA/LB



Vessel Traffic Service LA/LB

- 1994 to present
- Unique Public/Private Partnership between MX, USCG & State of California
- Maritime version of Air Traffic Control
- ~28,000 vessel movements per year



Special Huge Challenges Being Met: 1: COVID-19 backup of Tankers & Cruise Ships March-June 2020



Record: 32 ships at anchor including 24 tankers & 6 cruise ships

2: COVID-19 backup of Container Ships: September 2020-Ongoing



10 Nov

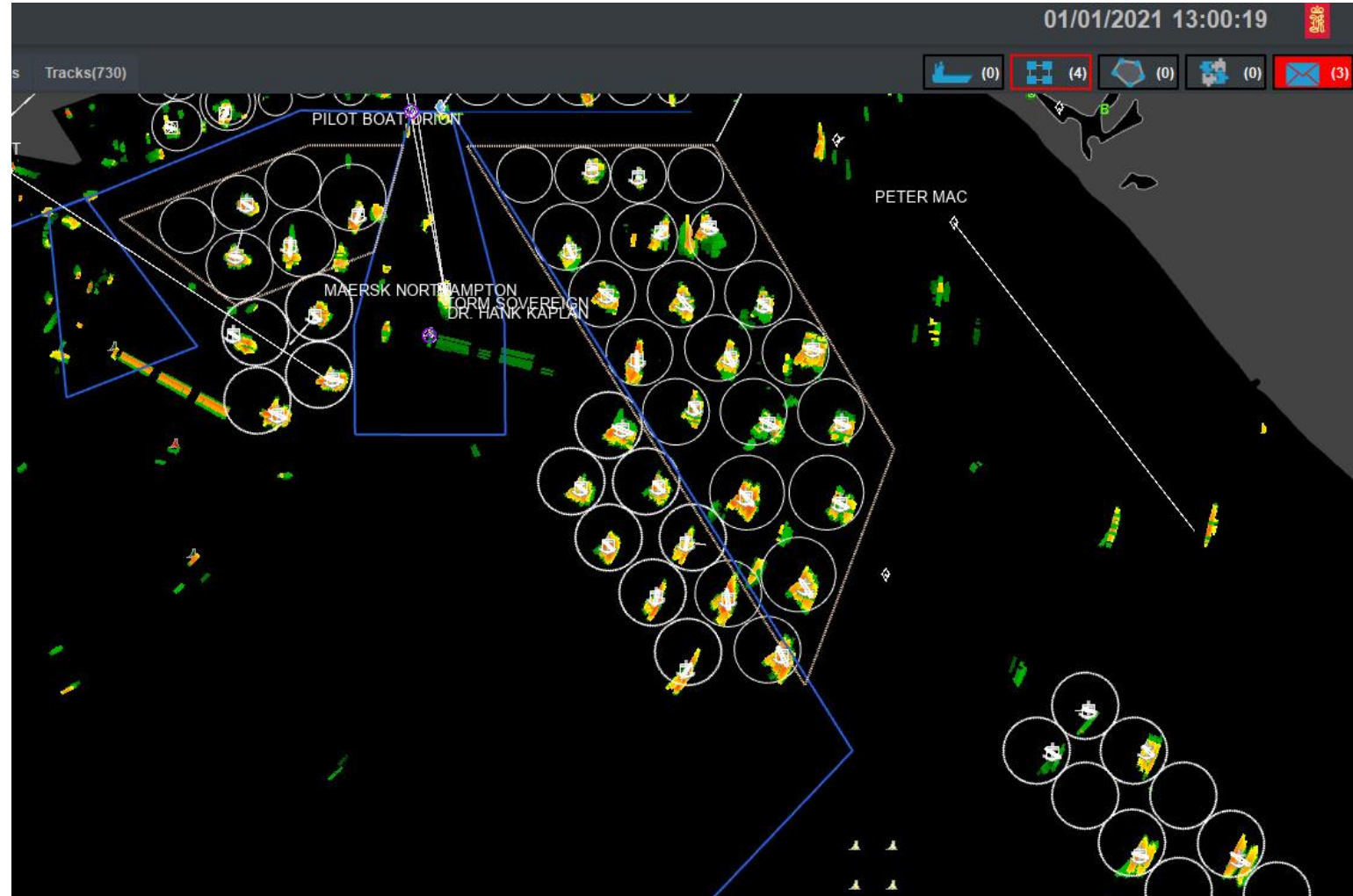
Current Records: 114 total ships at anchor & *loitering* including 86 container ships.
2014-2015 congestion records: 48 total ships at anchor including 28 container ships.

Anchorage off Los Angeles and Long Beach

Normal, 2019, Pre-COVID
Average 17 ships at anchor



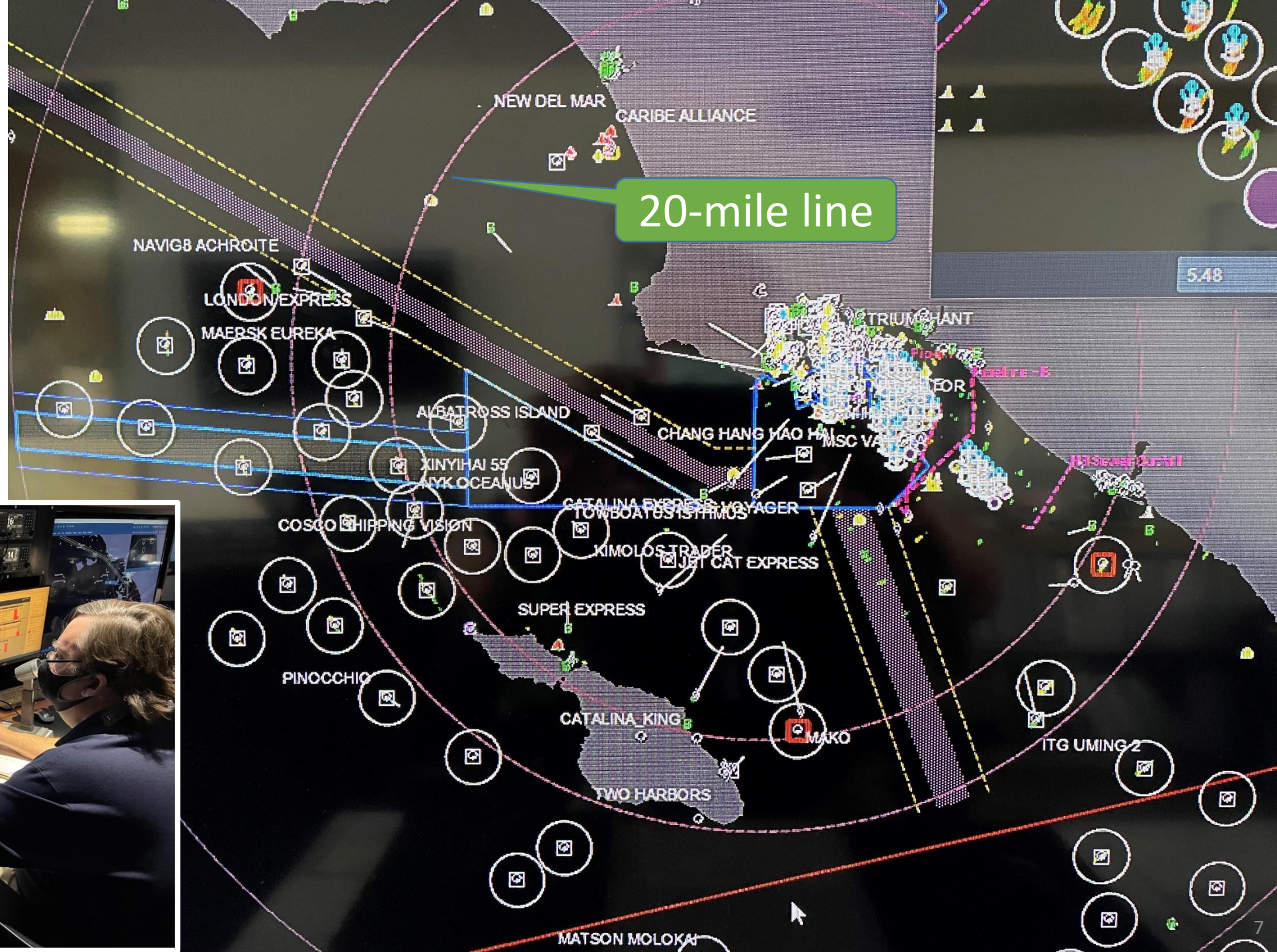
Oct 2020
As many as 55 anchored



The anchorages are the circles; the yellow and white icons are the ships

**Plus,
as many as 62
vessels loitering
in November
2021**

Vessel Traffic Supervisor
QM2 Mike Conner
USCG, Retired



Way Forward:

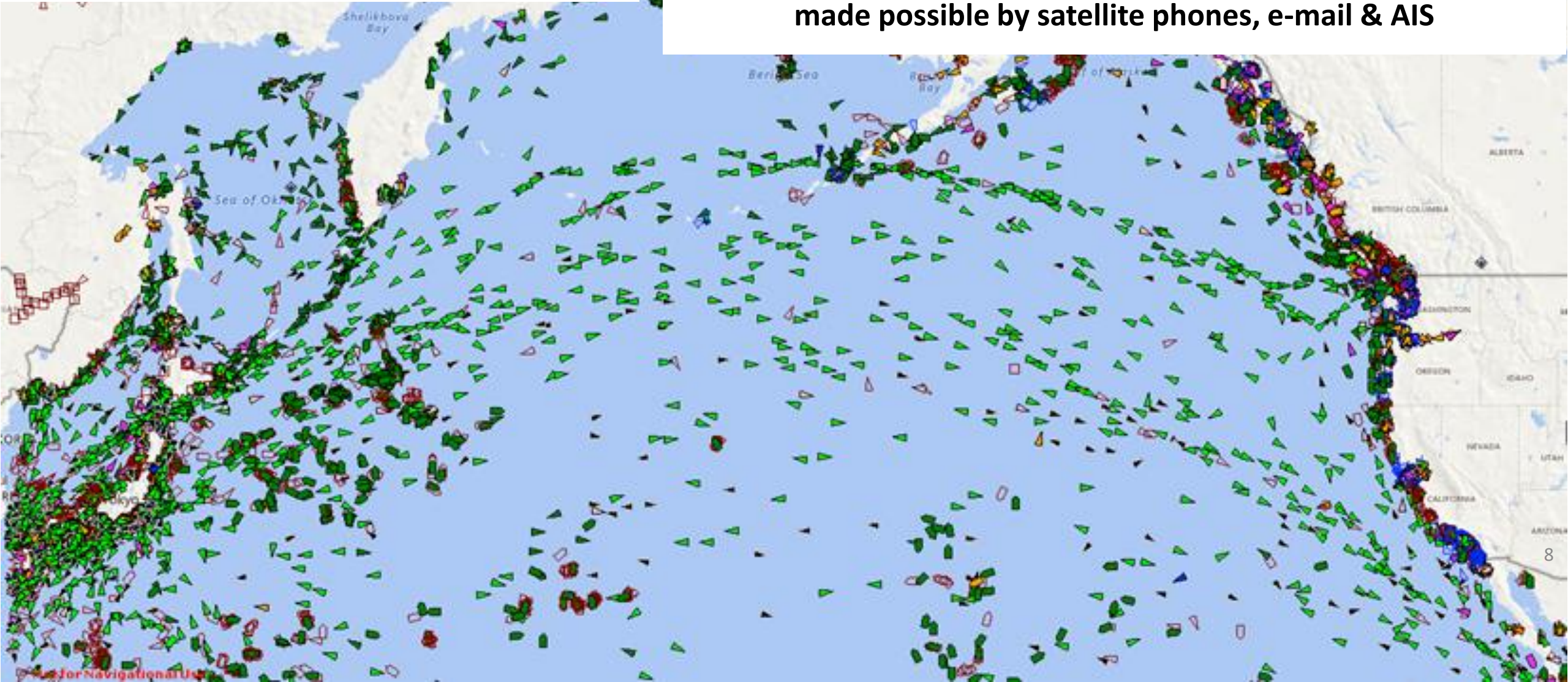
Pacific Maritime Management Service

Partnership of

MX SoCal & MX Alaska (Juneau)

Queuing for Labor for Container Ships:
100-year-old process: Queue upon arrival,
originally at breakwater and then at 20-mile line from LA/LB

New Process: Queue upon departure from Last Port of Call,
made possible by satellite phones, e-mail & AIS



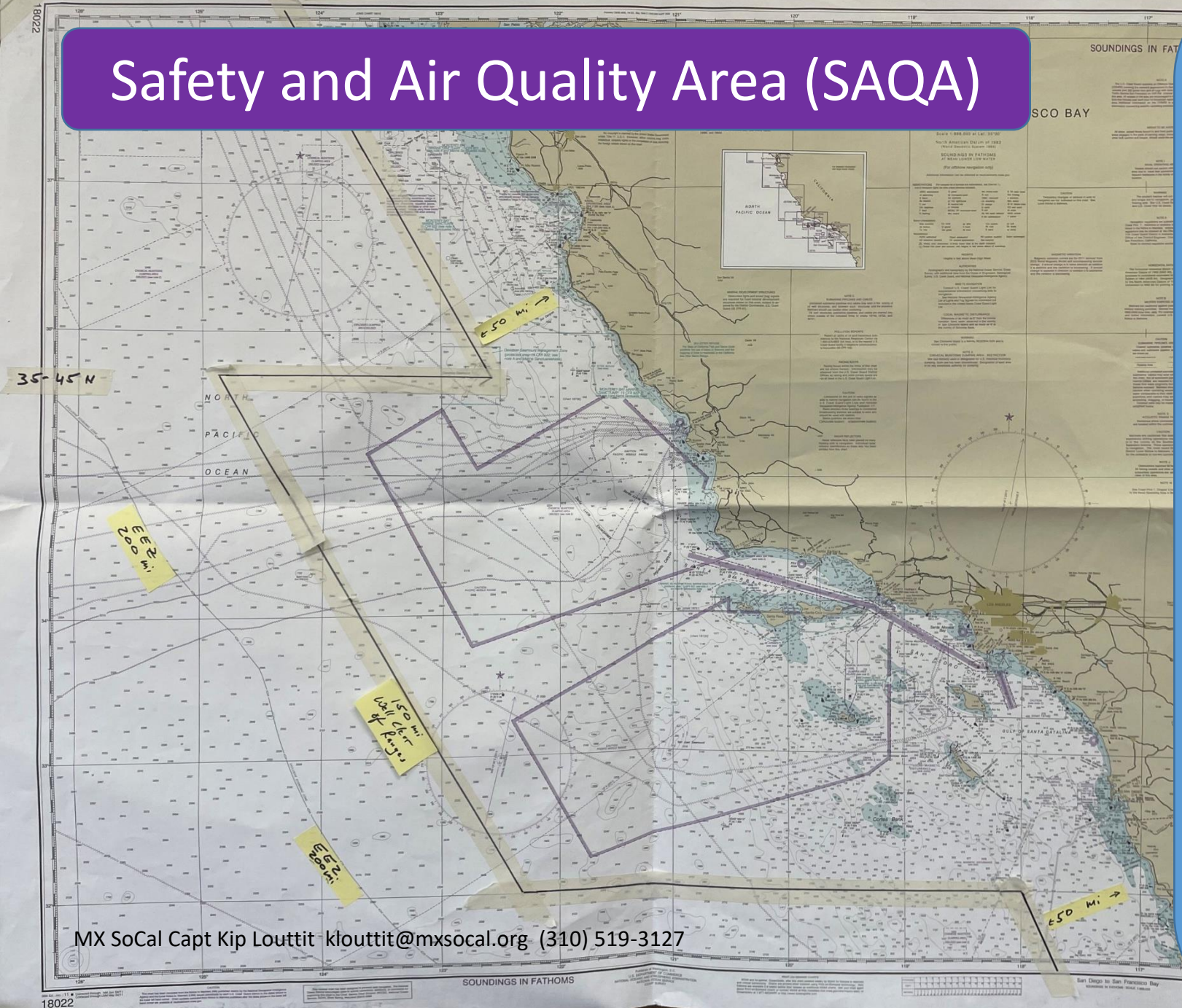
Safety and Air Quality Area (SAQA)

Pacific Maritime Management Service (PacMMS)

Until vessels have a berthing assignment in the reasonable future (defined as 72 hours), vessels must stay out the outlined Safety and Air Quality Area (SAQA)

- Coming from the North and South:
More than 50 miles from California and Mexico
- Coming from the West:
More than 150 miles from shore to remain well clear of DOD Ranges (outlined in magenta)
- Anchorage 40-60% full (25-35 vessels)
- Vessels loiter by exception, such as getting underway from anchor for storm, etc.
- Exceptions:
 - Vessels not carrying containers
 - Container ships in normal transits to/from ports for normal operations such as bunkers
 - Force Majeure & Emergencies

MX SoCal Capt Kip Louttit klouttit@mxsocal.org (310) 519-3127



Calculated Time of Arrival (CTA) Calculation for Labor:

Date/Time of departure Last Port of Call (LPOC) + (distance / speed = time of voyage) = CTA

CTA = used in place of ATA (Actual Time of Arrival) at 20-mile line for labor allocation.

Vessel Name	Vessel Type Code	IMO	LPOC	NPOC	Master's ETD (UTC)	Master's ADT (UTC)	PacMMS ATD (UTC)	Voyage Distance	Speed (kts)	Voyage Time	PacMMS CTA (UTC)	PacMMS CTA (Pacific)
MANULANI	UCC - Cargo (container)	9273674	Busan, KOR (5,270 nm)	Long Beach, USA	12/11/2021 6:00	12/11/2021 7:36	12/11/2021 7:36	5270	21	251	12/21/2021 18:36	12/21/2021 10:36
EVER FOREVER	UCC - Cargo (container)	9850575	Oakland, USA (383 nm)	Los Angeles, USA	12/11/2021 22:00	12/11/2021 8:06	12/11/2021 8:06	383	17	23	12/12/2021 7:06	12/11/2021 23:06
A FUJI	UCC - Cargo (container)	9833383	Yantian, CHN (6,392 nm)	Los Angeles, USA	12/11/2021 10:00	12/11/2021 8:06	12/11/2021 8:06	6392	18	355	12/26/2021 3:06	12/25/2021 19:06
MAERSK NORTHWOOD	UCC - Cargo (container)	9222118	Lazaro Cardenas, MEX (1,352 nm)	Long Beach, USA	12/11/2021 2:00	12/11/2021 3:18	12/11/2021 3:18	1352	17	80	12/14/2021 11:18	12/14/2021 3:18
MAERSK KENTUCKY	UCC - Cargo (container)	9193240	Yantian, CHN (6,392 nm)	Los Angeles, USA	12/10/2021 0:00	12/10/2021 10:20	12/10/2021 10:20	6392	18	355	12/25/2021 5:20	12/24/2021 21:20
MELINA	UCC - Cargo (container)	9401075	Tacoma, USA (1,190 nm)	Los Angeles, USA	12/8/2021 8:00	12/11/2021 2:06	12/11/2021 2:06	1190	18	66	12/13/2021 20:06	12/13/2021 12:06

Enables slow speed steaming and/or loitering outside SoCal waters

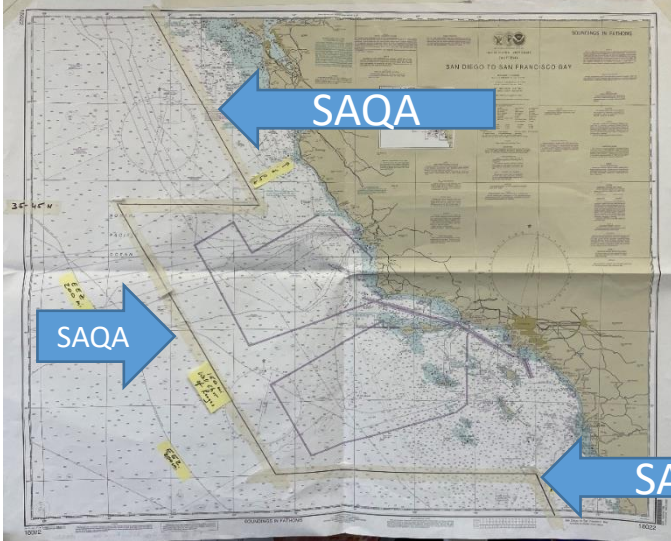
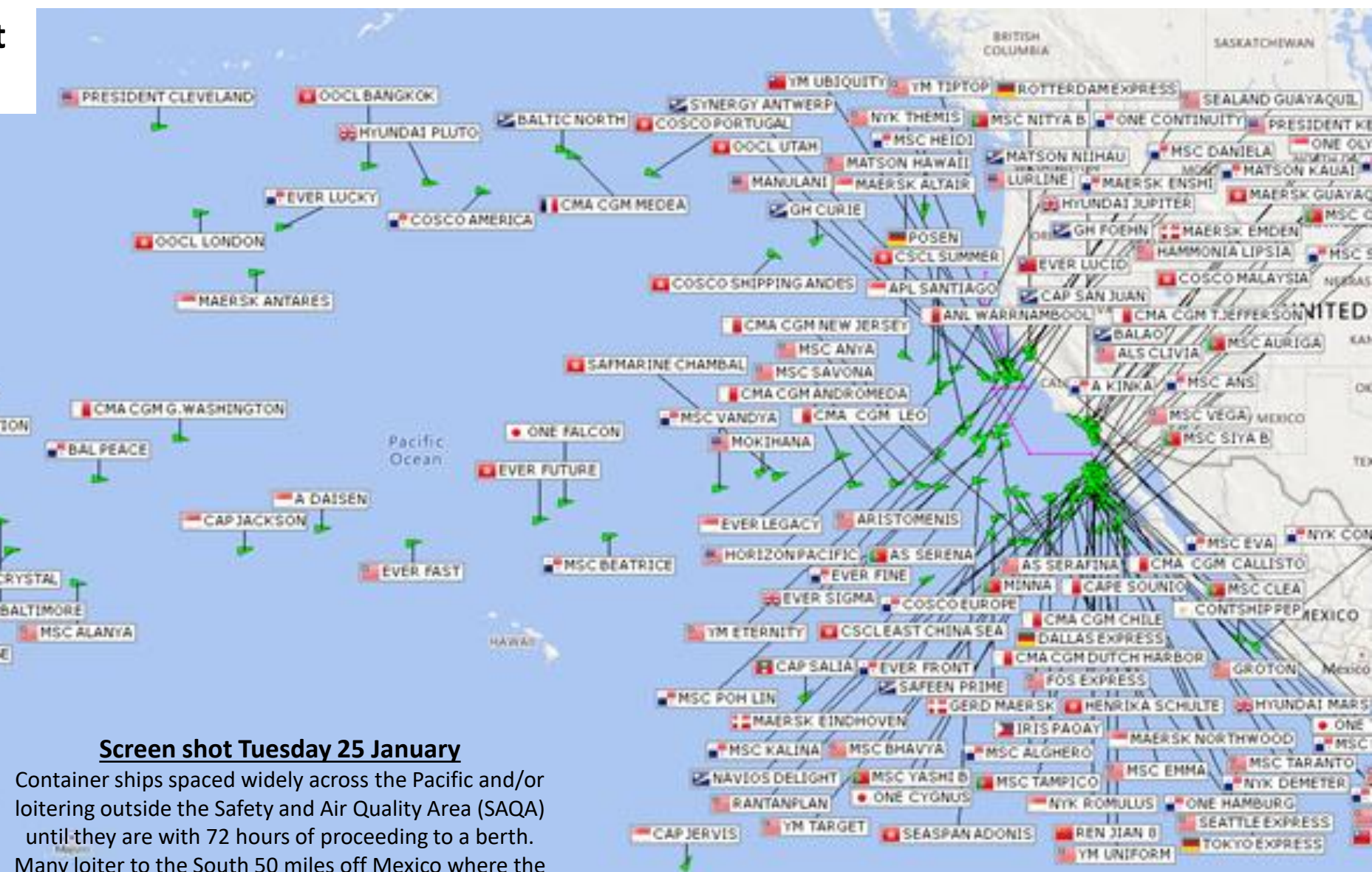
Working Group:



Plus ~10 Ocean Carriers and Terminals

PMA currently paying

Pacific Maritime Management Services (PacMMS)



Screen shot Tuesday 25 January

Container ships spaced widely across the Pacific and/or loitering outside the Safety and Air Quality Area (SAQA) until they are with 72 hours of proceeding to a berth. Many loiter to the South 50 miles off Mexico where the weather is better than off California.

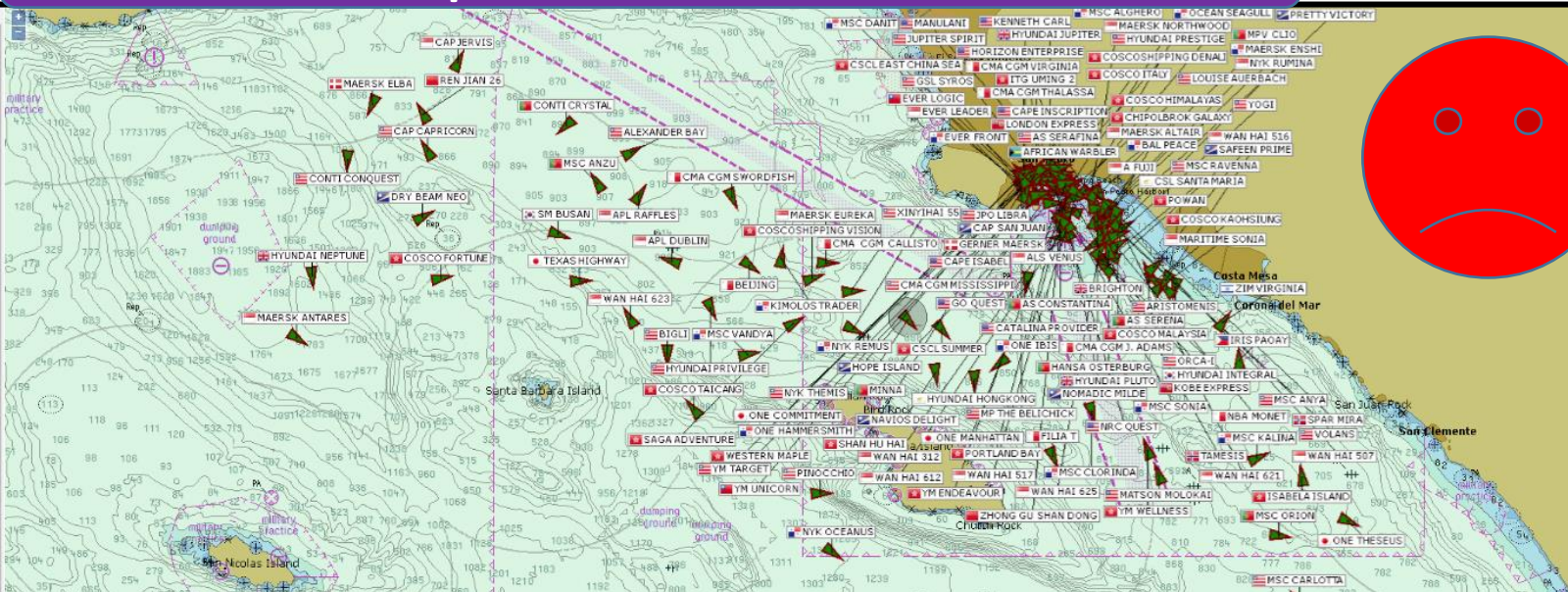
SAQA for Oakland uses same 50 miles from land for Central & Northern CA as established for LA/LB

SAQA 150 miles off SoCal to stay clear of 2 DOD missile ranges

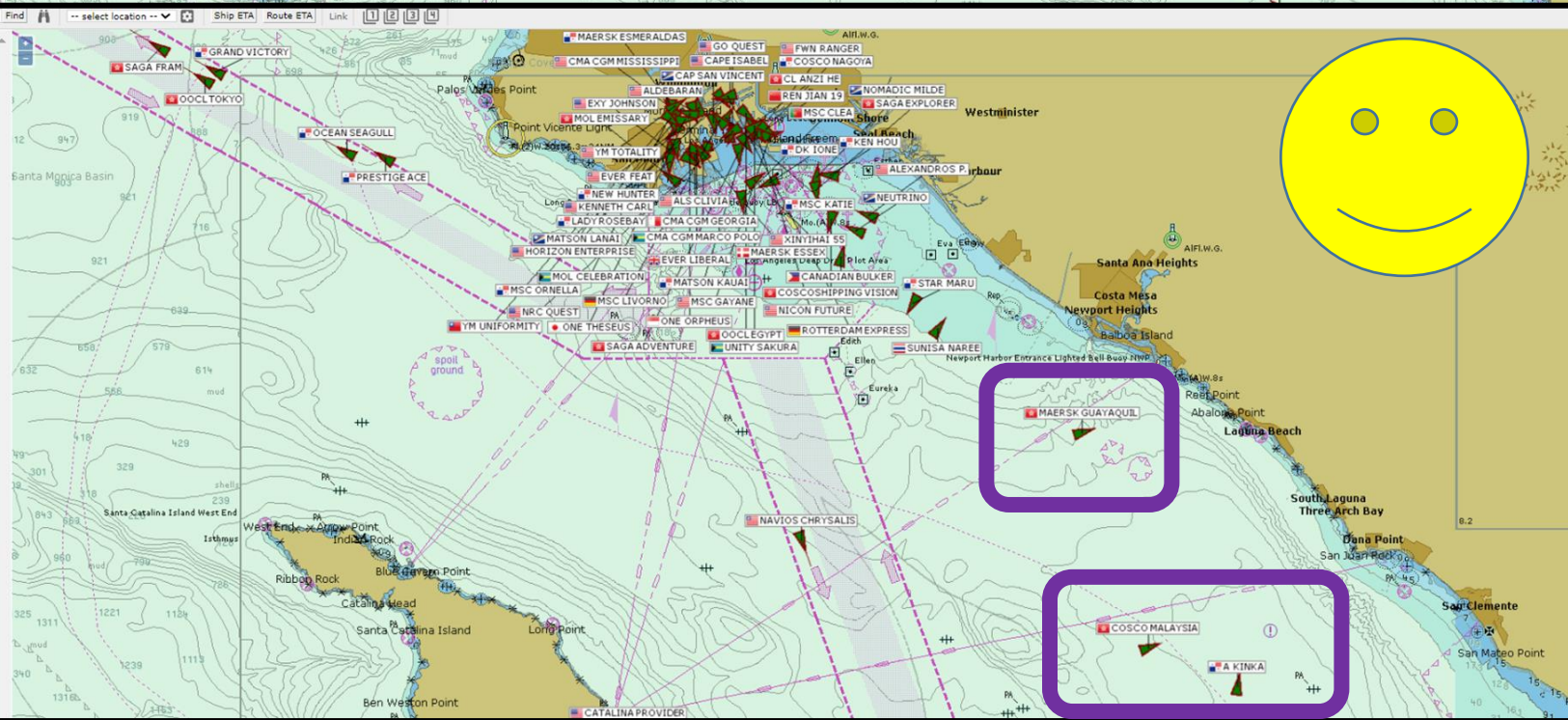
SAQA off Mexico 50 miles from land



PacMMS Implemented 1600 16 Nov



62 vessels of all types
loitering noon 16 Nov



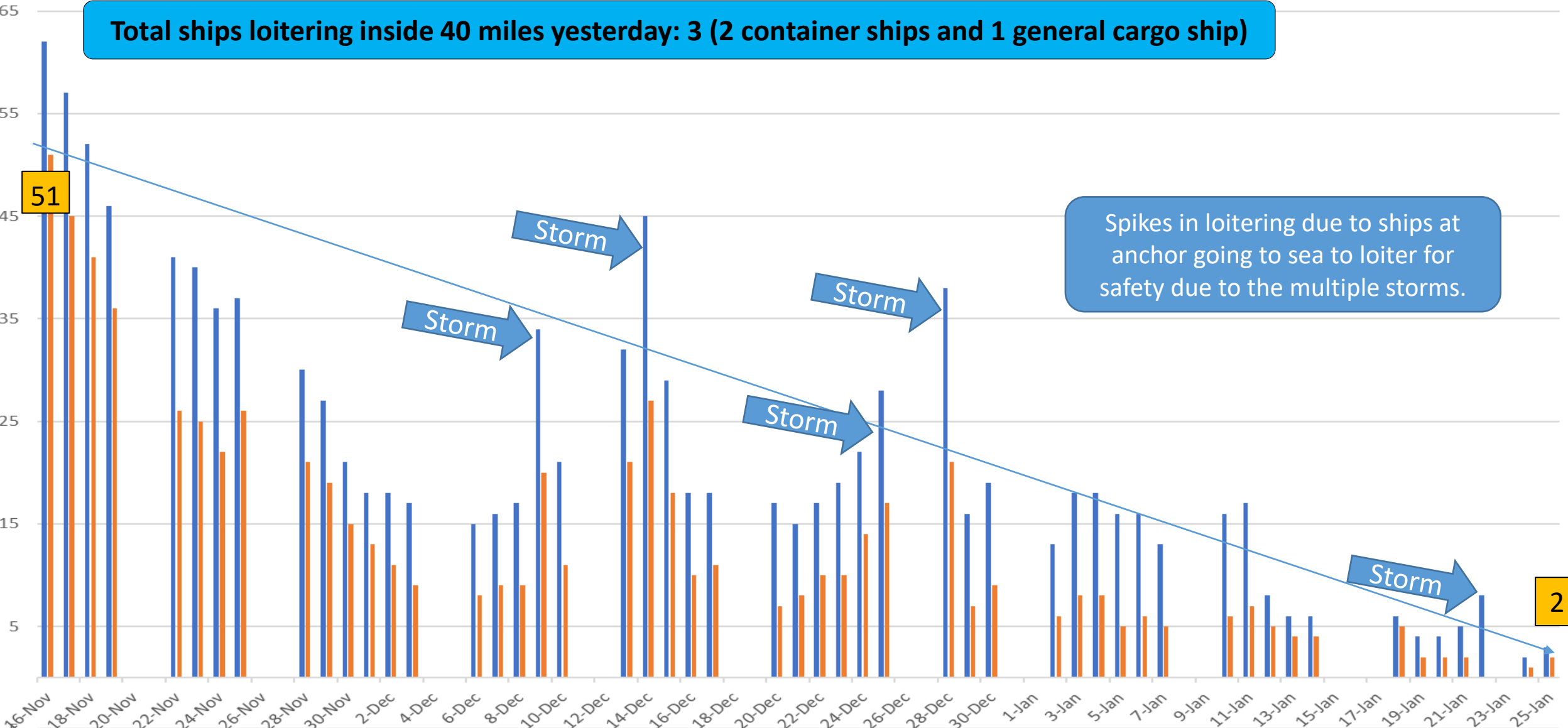
3 vessels of all types
loitering noon
yesterday 25 Jan.

Record low of 2 on
24 Jan

Loitering Ship Count INSIDE 40 miles of LA/LB
 All Types of Ships Combined (Blue bars) &
 Container Ships (Orange bars) 16 Nov 2021 - Tue 25 Jan 2022

Total ships loitering inside 40 miles yesterday: 3 (2 container ships and 1 general cargo ship)

Spikes in loitering due to ships at anchor going to sea to loiter for safety due to the multiple storms.



MX SoCal Capt Kip Louttit klouttit@mxsocal.org (310) 519-3127

■ All Types ■ Container Ships

Record loitering low 2 total, 1 container 24 Jan

**Container Ships Inside 40 mi
plus Outside SAQA**
LA/LB 1 Jan 2019 - Tue 25 Jan 2022

90 outside SAQA + 8 inside
= 98 backup

On 16 November 2021, all 86 container ships in the backup were anchored or loitering within 40 miles of the Ports of Los Angeles and Long Beach.

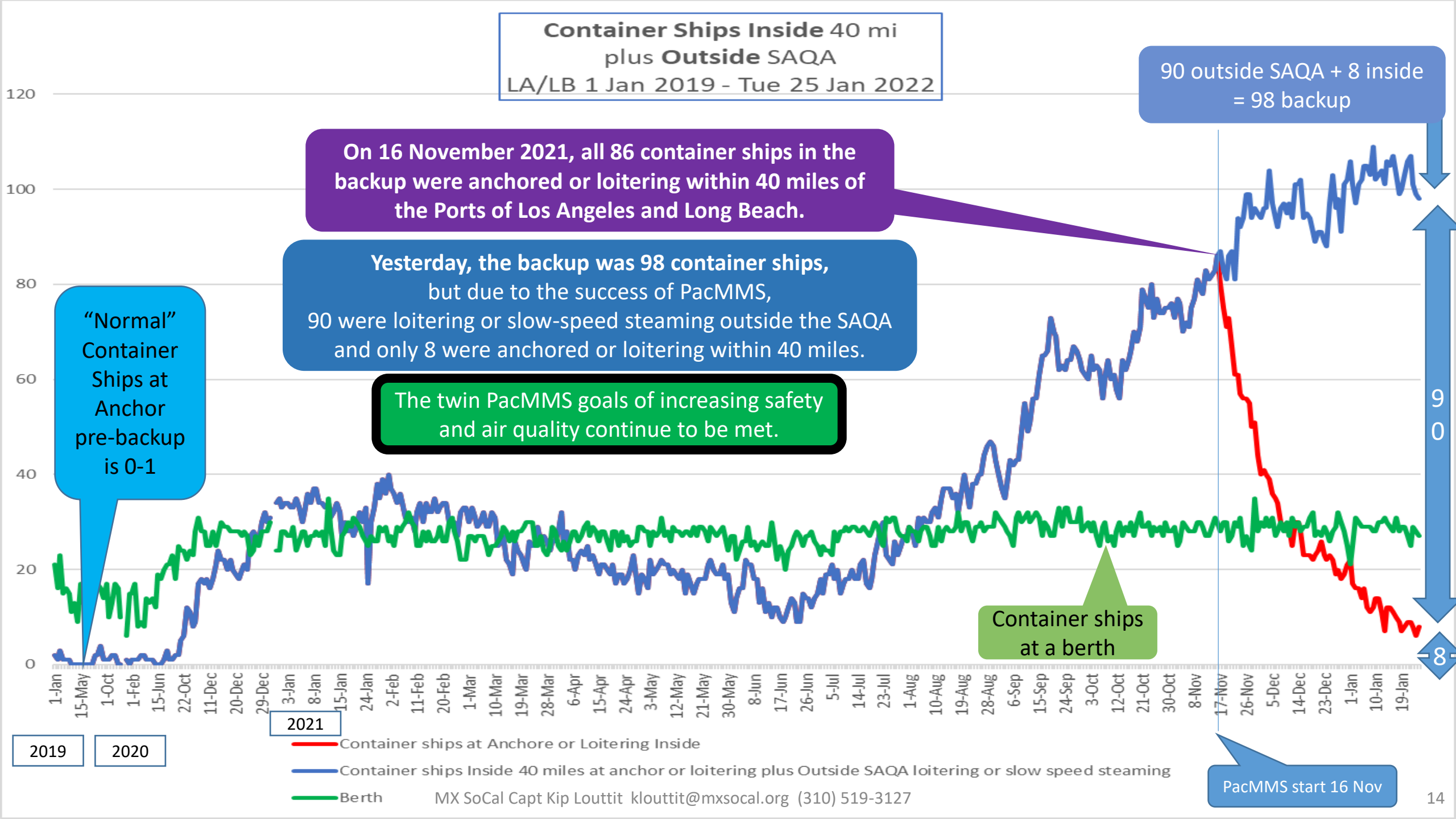
Yesterday, the backup was 98 container ships, but due to the success of PacMMS, 90 were loitering or slow-speed steaming outside the SAQA and only 8 were anchored or loitering within 40 miles.

The twin PacMMS goals of increasing safety and air quality continue to be met.

“Normal” Container Ships at Anchor pre-backup is 0-1

Container ships at a berth

PacMMS start 16 Nov



2019 2020

2021

- Container ships at Anchore or Loitering Inside
- Container ships Inside 40 miles at anchor or loitering plus Outside SAQA loitering or slow speed steaming
- Berth

Next Steps:

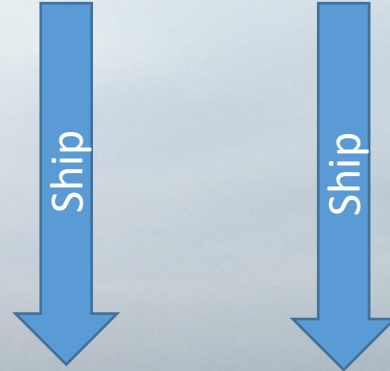
1. Keep anchored vessels at 40-60% of capacity (25-35) vessels, up from 17 vessels pre-COVID.
2. Get loitering vessels down to zero.
3. Keep commerce flowing while ensuring the 2 goals of PacMMS are met: Increase Safety and Air Quality.



Beautiful Sunrise on a morning with low fog observed from MX/VTS

Hopefully, this was helpful! Thank you for your time! Questions, comments & discussion?

We enable close, efficient & safe spacing



We enable safe ship movement when other ports would need to shut down.



MX mission: 7 x 24 x 365 provide traffic management, communications, and maritime information services to promote a safe, secure, efficient, reliable and environmentally sound marine transportation system.

MX: There when you need us most... emergencies (fires, medical, rescue), fog and bad weather, traffic anomalies, natural or man-made disasters, etc.

**24 Hour Vessel Traffic Center
Watch Floor: 310-832-6411
www.mxsocal.org
info@mxsocal.org
VHF-FM Channel 14**

Providing Maritime Peace of Mind since 1923

Point of Contact:
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End

5. Stakeholder Priorities & Activities

a. Ports

- i. Progress against SSCAC Recommendations
- ii. Funding Strategy

b. CARB

- i. Low NOx Omnibus now law
- ii. eTRU
- iii. CHE
- iv. HD I/M



SPBP Sustainable Supply Chain Advisory Committee Recommendations Update

THE PORT LA
OF LOS ANGELES

 Port of
LONG BEACH
THE PORT OF CHOICE

January 26, 2022

SFAC Recommendation List

1. Zero Emission Top Handlers
2. Zero Emission Drayage Trucks
3. Clean Trucks Program Acceleration
4. POLA-LADWP Committee
5. System Efficiency – HPEC
6. Multi-Port Clean Tech Requests for Information (RFI)
7. POLA LED Light Conversion
8. Cargo Handling Equipment
9. Clean Truck Program Acceleration 2.0
10. Prioritize Funding for Clean Technology Deployment at the San Pedro Bay Port Complex
11. Increase Use of On-Dock and Low Emissions Locomotives
12. SPBP – System of Systems
13. SPBP – Funding and Resource Prioritization
14. SPBP – Fueling Infrastructure
15. SPBP – Harbor Craft

1. Zero Emission Top Handlers

“By Dec 31 2016...issue an RFP for the demonstration of zero emission (ZE) top handlers at one or more Port terminals”

- POLA has completed a demonstration of 2 ZE top handlers at Everport Marine Terminal with support of a CEC Grant
 - Demonstration issues included infrastructure and batteries. Terminal plans to continue to work with Taylor
 - Positive operator feedback, terminal plans to continue use
- Two other projects ongoing at POLA (managed by SCAQMD and the Center for Transportation and the Environment)
- POLB completed demonstration of 2 ZE top handlers at LBCT and SSA Pier J with support of a CARB grant
 - Positive feedback from workforce
 - Duty cycle differences resulted in different performance
- Proposed START demonstration at SSA Pier C moved to Oakland given duty cycle/performance issues. Demo to begin Feb 2022.
- TAP fuel cell interest

2. Zero-Emission Drayage Trucks

“...[P]ursue the evaluation and demonstration of zero-emission drayage trucks in preparation for a feasibility report in 2020 or sooner.”

- Ports currently directly or indirectly supporting ZE drayage trucks in various demonstrations across Southern California (POLA, POLB, SCAQMD). Total trucks deployed or planned approaching 200.
- Ports released first Truck Feasibility Study in April 2019.
- Second Feasibility Study draft in preparation. Expected completion in Spring 2022.

3. Clean Trucks Program Acceleration

“Take advantage of the diverse stakeholder group represented within the SFAC...work with federal, state and local agencies, elected officials, and other to advocate for this shared vision to the greatest extent possible...work with Long Beach Mayor and the Port of Long Beach...Ensure that the San Pedro Bay Ports’ competitiveness is increased...lower the cost to the truck owner of the transition to zero and near-zero emission trucks...”

- Both Ports have been advocating for State and Federal funding opportunities
- Advocacy for tax relief for the purchase of ZE trucks in California
- Clean Truck Program (CTP) implementation ongoing:
 - Clean Truck Fund Rate adopted into tariffs
 - Clean Truck Fund Spending Plan(s) in development
 - Rate will be collected April 1, 2022

4. POLA-LADWP Committee

“...convene a task force consisting of the Executive Director of the Port of Los Angeles, the General Manager of LADWP, and other appropriate staff... To identify the infrastructure necessary to support the widespread electrification of the goods movement activities in and around the Port of Los Angeles...”

- POLA-DWP MOU for clean technology infrastructure projects signed. Total of \$15 Million to Port projects.
- Ongoing collaboration on a per-project basis

5. System Efficiency – HPEC

“...work with officials at the local, state and federal levels to advance the development and implementation of the HPEC Project. Additionally...explore and facilitate as appropriate, the use of a public-private-partnership (PPP) model in order to maximize both private and public sector cooperation, support and investment in the project.

- Project Discontinued.

6. Multi-Port Clean Tech RFI

“...lead the development of multiple Multi-Port Requests for Information (RFI) from manufacturers of zero and near-zero emission drayage trucks, container handling equipment, marine engines / Fuel technologies, LED lighting, and other potential equipment...”

- In January 2020, the Technology Advancement Program released an Open RFI for concept papers related to clean technology projects interested in support or funding from the Ports
- Total of nine submissions received in 2021
 - Proposed concepts range from ZE tug infrastructure to hydrogen fuel-cell CHE and mobile fueling solutions
 - Several projects pending approval by Ports' Boards

7. LED Light Conversion

“...work to aggressively retrofit the lighting in the Port to high efficiency LED technology as soon as possible.”

- POLA initiated a program in 2019 to replace all High Mast lighting at terminals with LED
 - All major terminals completed
 - Remaining tenants projects to be completed in 2022
 - High Mast LED replacement costs estimated at \$6.5 Million and anticipated to save approximately 3MW of power, with an average of 10,950 MWhr per year.
- POLB strategy focused on LED conversions in terminals and along streets
 - LED street light installation underway – ~90% complete
 - Major terminal conversions completed or underway, terminal lease requirements and funding support through EERM

8. Cargo Handling Equipment

“...proposing the following process for identifying opportunities for air pollution and greenhouse gas emission reductions from cargo handling equipment.”

- Currently managing or supporting several demonstration projects (POLA, POLB, SCAQMD):
 - 74 ZE Battery Electric Yard Tractors (2 Hydrogen)
 - 7 ZE Battery Electric Top Handlers (1 Hydrogen)
 - 9 Grid Electric RTGs
 - 3 ZE Battery Electric Large-Capacity Forklifts
- Updated CHE Feasibility Assessment draft process underway. Expected release Spring 2022.

9. Clean Truck Program Acceleration 2.0

“...that the San Pedro Bay Ports are exclusively served by trucks operating with zero tailpipe emissions or meeting the anticipated CARB Ultra-Low NO_x emission standard...by July 1 2023.”

- Clean Truck Program (CTP) implementation ongoing:
 - Clean Truck Fund Rate adopted into tariffs
 - Clean Truck Fund Spending Plan(s) in development
- CAAP drayage truck registry soft-ban as of July 2023 still under discussion
 - State regulation is being developed to only allow ZE trucks to enter the drayage truck registry after 2023.

10. Prioritize Funding for Clean Technology Development at the SPBP Complex

“...Mayor Garcetti aggressively communicate with relevant federal, state, and local agencies and elected officials to call for prioritization of available funding for zero and near zero emission goods movement technologies in California.”

- The Ports have received \$157 Million over the last few years (Total project cost: \$285 Million)
- Sample Projects:
 - POLA:
 - “Shore to Store” project
 - Wireless Charging Demonstration
 - Advanced Cargo Handling Equipment Deployments
 - Green Omni-Terminal
 - POLB:
 - Sustainable Terminals Accelerating Regional Transformation project
 - ZE Equipment Transition Project
 - Commercialization of POLB Off-Road Technology Demonstration Project
 - Port Advanced Vehicle Electrification
- Both Ports actively working to secure future federal funding

11. Increase Use of On-Dock & Low Emissions Locomotives

- “Coordinate with GE on Port Optimzer Project”
Project ongoing
- “Work with the Port’s Engineering Team to identify...the range of on and off-Port infrastructure...needed to increase on-dock rail capacity”
Ports investing >\$1B in projects focused on expansion of rail capacity
- “Work with UP, BNSF, and PHL to identify strategies and opportunities to bring their Tier 4 or better locomotives into Port related activities...”
Coordination meetings ongoing. BNSF working on Zero Emission Line-haul locomotive, UP received DERA grant to demo ZE switcher.
- “Use the SPBP’s Technology Advancement Program to support development...of locomotives capable of zero emission operation.”
PHL Proposed new ZE locomotive demo in late 2021. Project details under review.

12. SPBP – System of Systems

“...As new fuels, technologies and/or system improvements are considered and proposed, analysis should be completed...to identify potential areas of benefit and risk to system efficiency from the proposed action, and identify measures to address the risks, and evaluate how the proposed action will help contribute to the states goal of improving freight system efficiency by 25% by 2030.”

13. SPBP – Funding & Resource Prioritization

“...Focus on the largest sources of emissions with near-term and currently available technologies...Near term pilots that are scalable...Cost-effective investments with environmental, economic, and technological sustainability...Protecting human health...by accelerating the deployment of zero and near-zero emission technologies...”

- Port staff is working on a detailed cost-effectiveness assessment, analyzing the potential emissions reductions of various potential strategies versus their total cost
- Prioritization on OGV reductions – POLB GSI Update, TAP prioritization for OGV projects
- Focusing demonstrations on terminal equipment with greatest emission reduction potential

14. SPBP – Fueling Infrastructure

“...develop and release an illustrative model of various deployment scenarios that detail the anticipated deployment of clean trucks...develop and release a proposed structure for the Clean Truck Incentive Program...survey existing truck fueling/charging locations in the vicinity of the port complex...assess several fueling and charging scenarios...leverage existing information to identify truck use patterns...”

- Feasibility Assessment includes review of existing infrastructure
- POLB Electric Charging Study and upcoming RFI
- POLA on-site public charging study underway (Volvo LIGHTS)
- Clean Truck Incentive Program Update
 - Ports’ draft spending plans will include incentives for infrastructure

15. SPBP – Harbor Craft

“...Prioritize investments in ship-assist and tanker escort tugs...advocate for expanded funds with larger incentives...support development and deployment of demonstration projects...Coordinate with HC operators to facilitate reliable access to electricity as ZE vessels become commercially available...”

- Ongoing demonstrations:
 - NETT
 - HyZET
 - START
- Recent TAP Proposal – Crowley ZE Tug
 - Requested \$2M from Ports, \$21M from Carl Moyer (Total cost \$30M)
 - Carl Moyer Funding was not awarded
 - Port staff planning to meet with Crowley + SCAQMD to discuss funding opportunities

6. Committee Focus in 2022

Date	Theme	Specific Topics	Potential Guests
January 26 th	<ul style="list-style-type: none"> SSCAC 2022 Level-Set 	<ul style="list-style-type: none"> Updates from Members, Mayors, Ports on 2022 activities & priorities Updates from CARB, Ports on funding programs, strategies Progress with existing SSCAC recs Definition of “sustainability” 	
March 16 th	<ul style="list-style-type: none"> CTP Implementation & ZE Infrastructure 	<ul style="list-style-type: none"> CTP Implementation Regional blueprint projects 	<ul style="list-style-type: none"> UCLA CEC
May 18 th	<ul style="list-style-type: none"> Marine Vessels – 2021 activity & technology opportunity 	<ul style="list-style-type: none"> Approach to the 2021 emissions inventory Commercial Harbor Craft regulation hearing SPBP Technology Feasibility Assessment 	<ul style="list-style-type: none"> Thetius (IoT on vessels) Ballard (Fuel Cell propulsion)
July 20 th	<ul style="list-style-type: none"> Increased Efficiency & On-dock Rail 	<ul style="list-style-type: none"> Federal focus & funding Research & resources for needs, impact assessments Short-haul rail ZE opportunities CARB locomotive regulation 	<ul style="list-style-type: none"> Everport Terminal Services METRANS
September 21 st	<ul style="list-style-type: none"> Workforce Development 	<ul style="list-style-type: none"> Training center developments Member activities Research & findings in 2022 	<ul style="list-style-type: none"> Green Workforce Coalition CSULB, UCLA
November 16 th	<ul style="list-style-type: none"> ZE Trucks & CHE Implementation 	<ul style="list-style-type: none"> CTP Update ACF Rulemaking 	<ul style="list-style-type: none"> TBD

7. Conclusion & Next Steps