



State Report

California's Marine Invasive Species Program

Pacific Ballast Water Group | April 24, 2024

Chris Scianni
California State Lands Commission

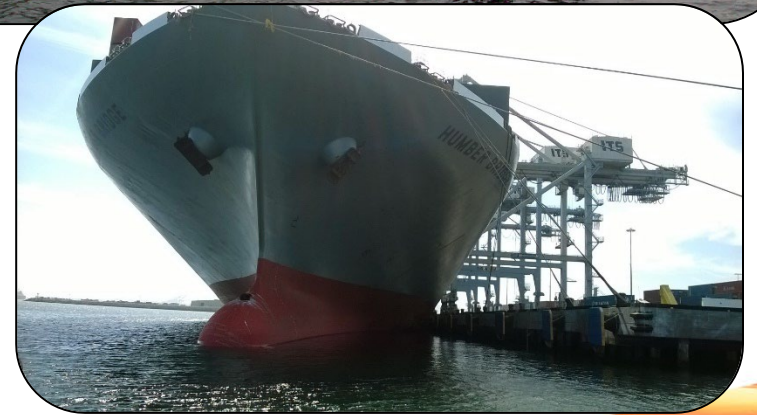


California State
Lands Commission

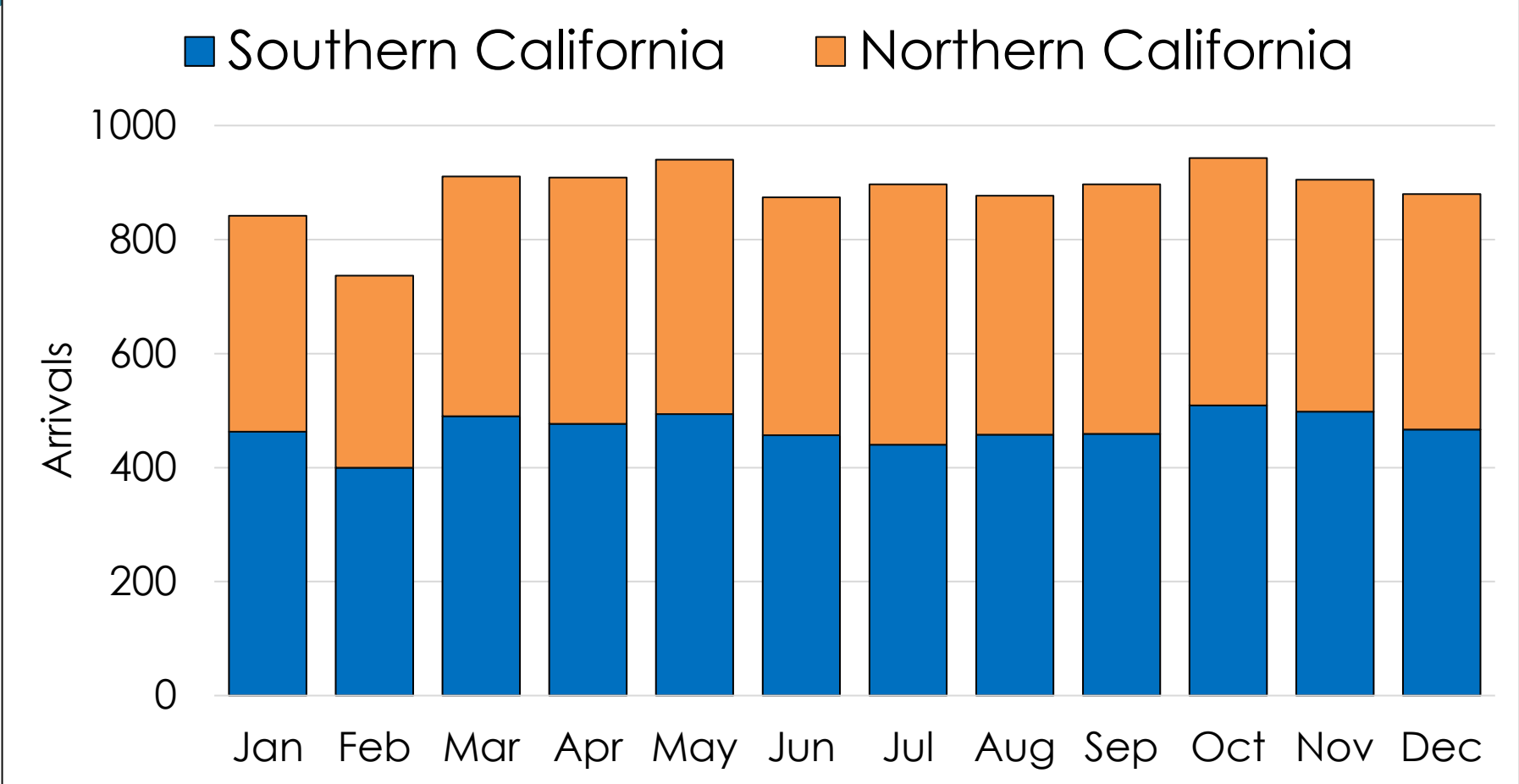


TOPICS

- Vessel Statistics
- MISP Enforcement
- MISP Updates
- MISP Accomplishments
- Looking ahead

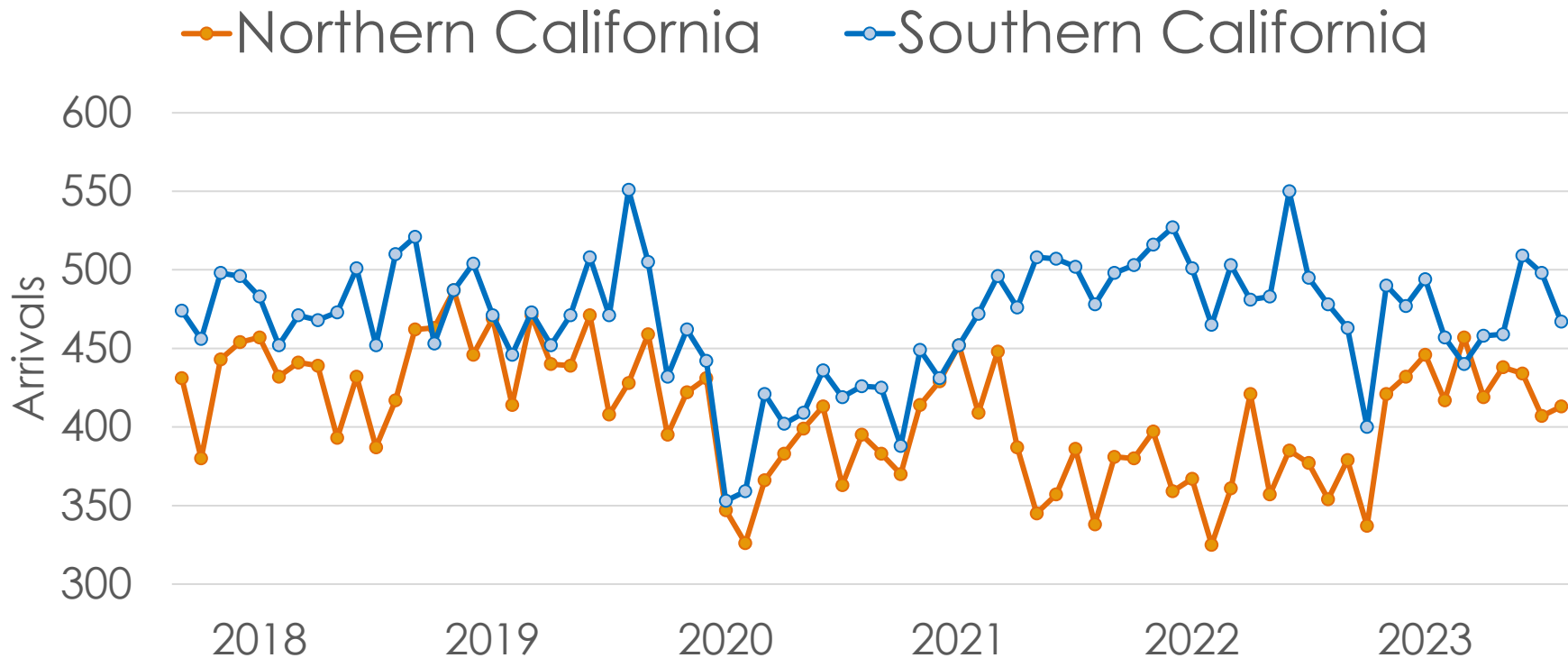


2023 Vessel Statistics – Arrivals (10,612)



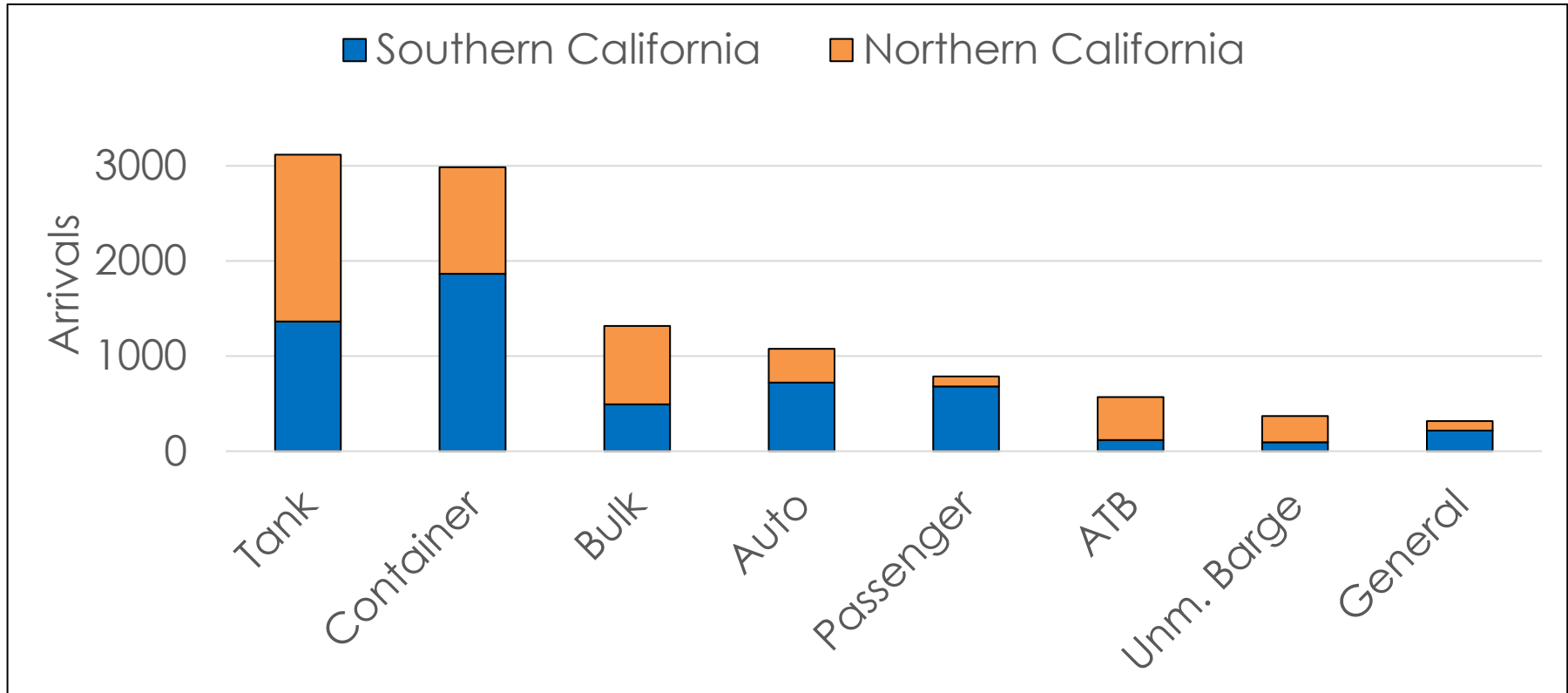
Vessel Statistics

Monthly Arrivals 2018-2023



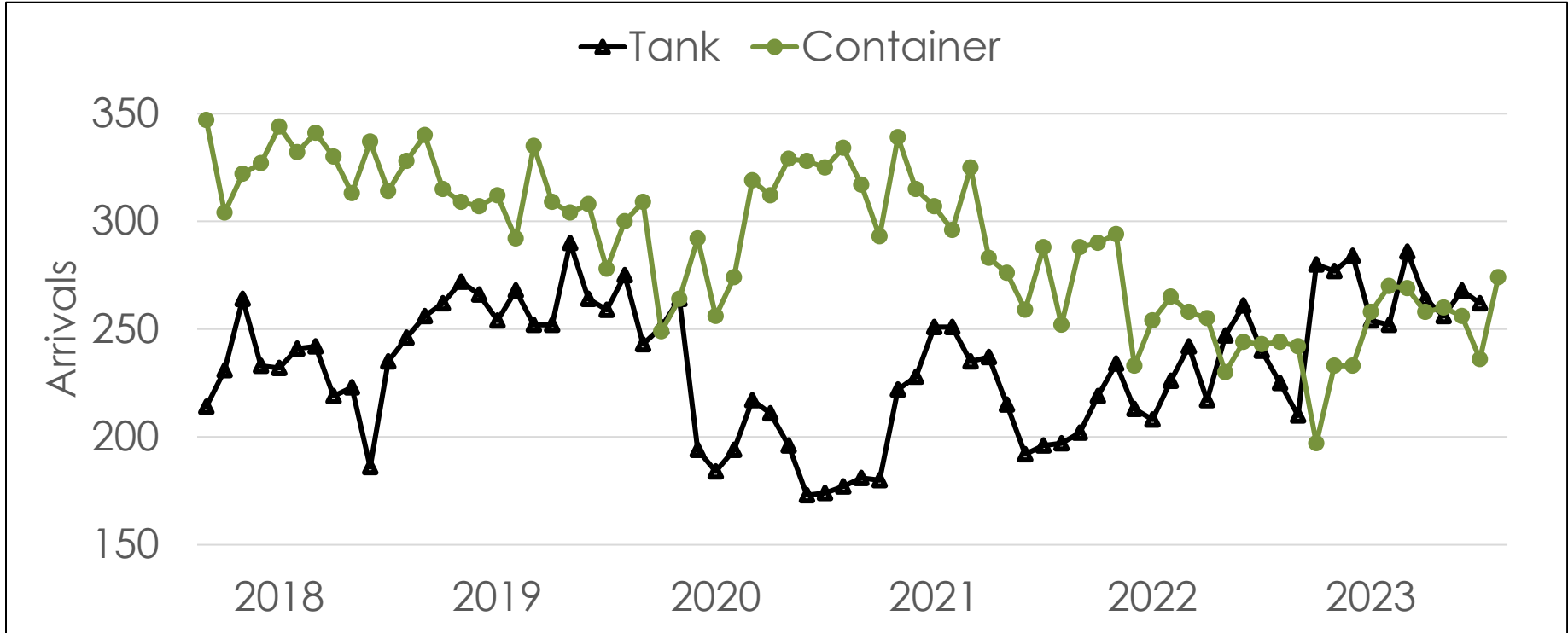
2023 Vessel Statistics

Arrivals by Vessel Type



Vessel Statistics

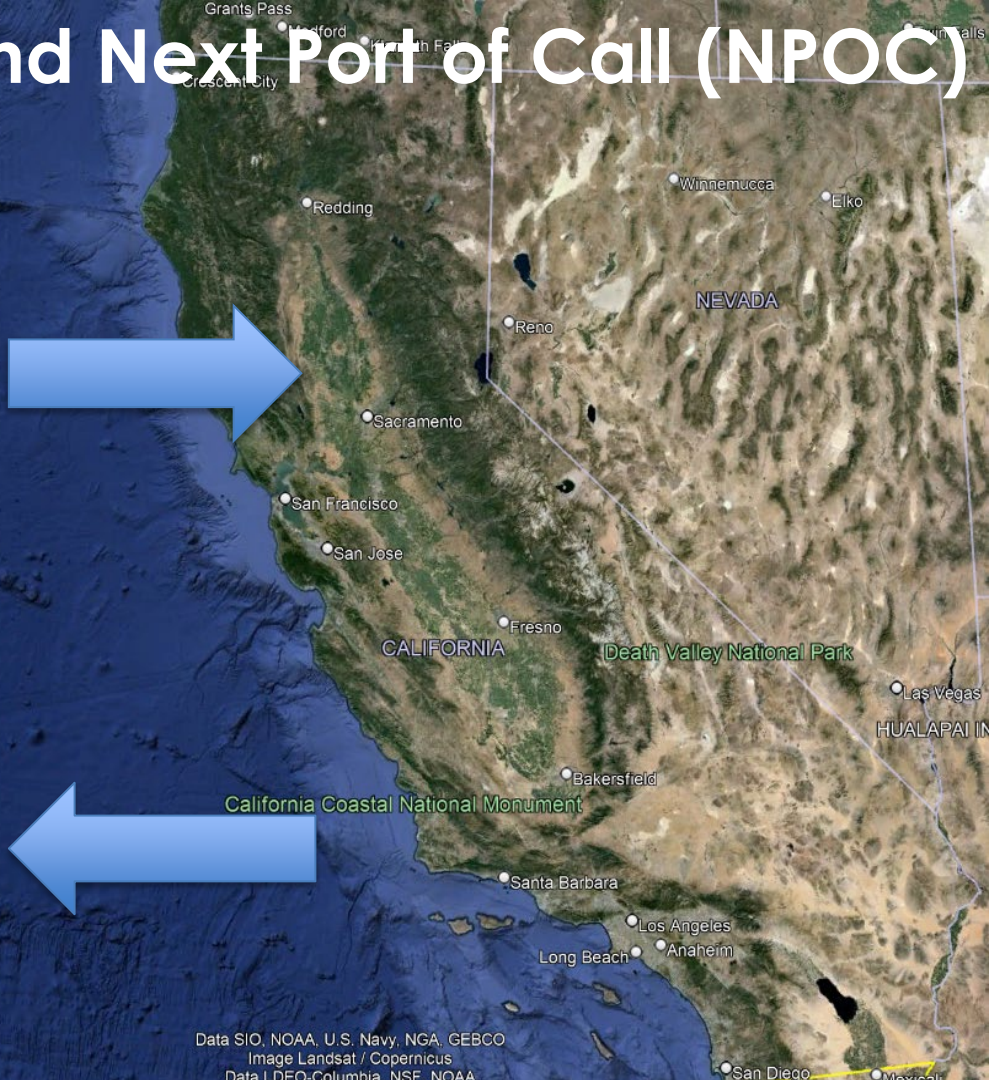
Tank and Container Arrivals 2018-2023



Last Port of Call (LPOC) and Next Port of Call (NPOC)

LPOC	Arrivals	% of non-CA LPOC
WA	528	8.50
HI	204	3.28
OR	114	1.84
AK	99	1.59
CANADA	273	4.39
MEXICO	1126	18.13

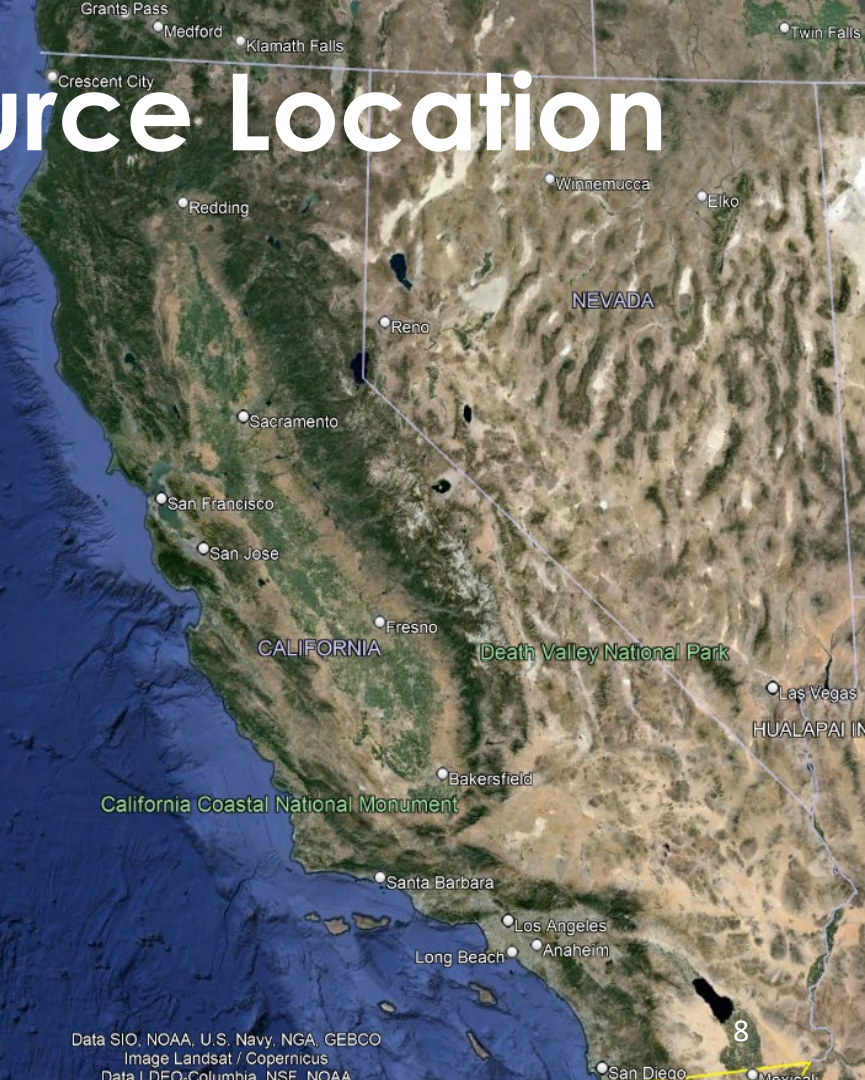
NPOC	Arrivals	% of non-CA NPOC
WA	489	7.55
HI	361	5.58
OR	195	3.01
AK	152	2.35
CANADA	278	4.29
MEXICO	956	14.76



Data SIO, NOAA, U.S. Navy, NGA, GEBCO
 Image Landsat / Copernicus
 Data I DFO, Columbia, NSF, NOAA

Ballast Water Source Location

Location	% Non-CA Discharged Volume (MT)
WA	6.09
HI	1.32
OR	1.23
AK	0.90
Mexico	18.98
Canada	0.79

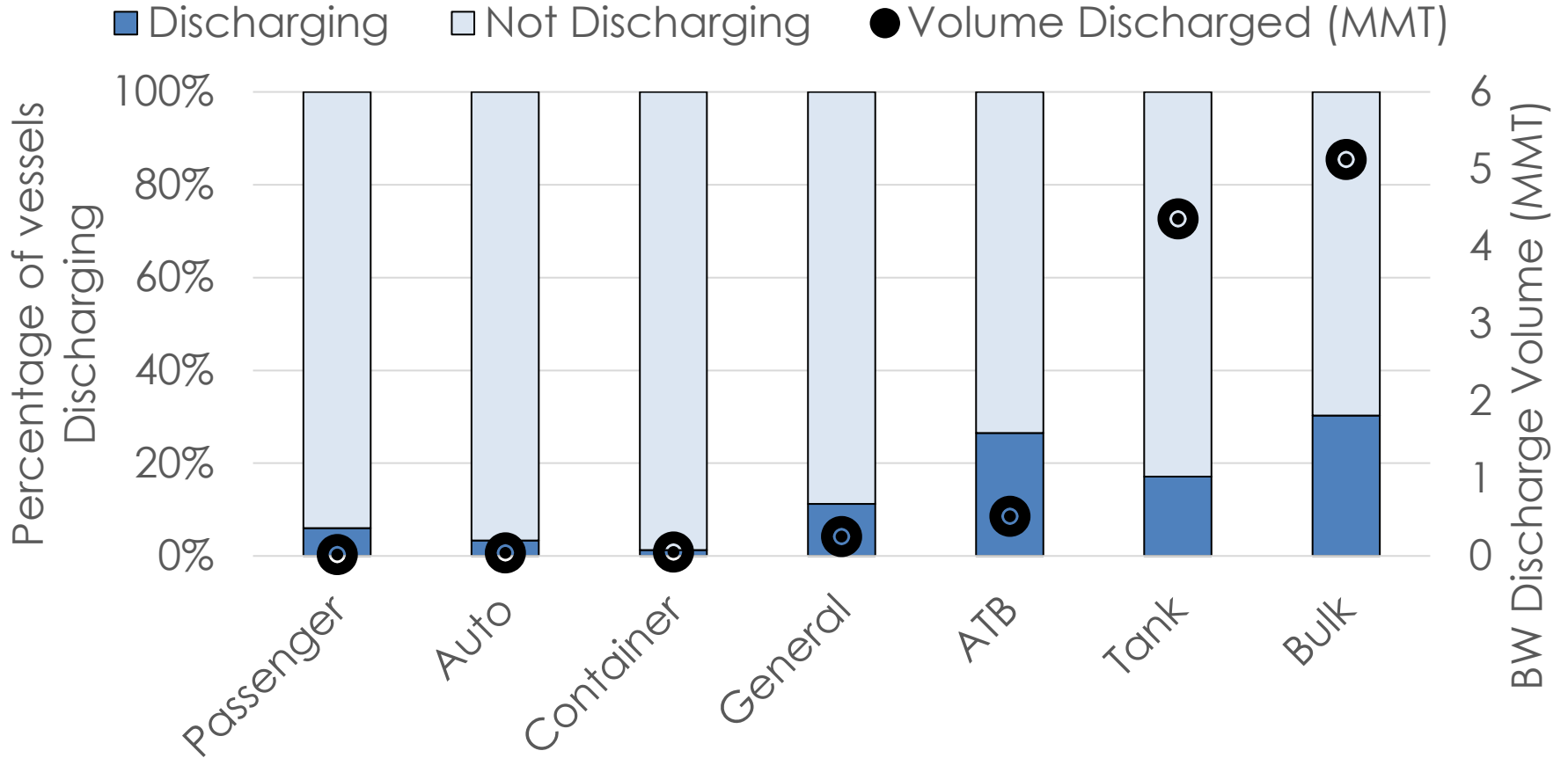


Last 10 ports visited

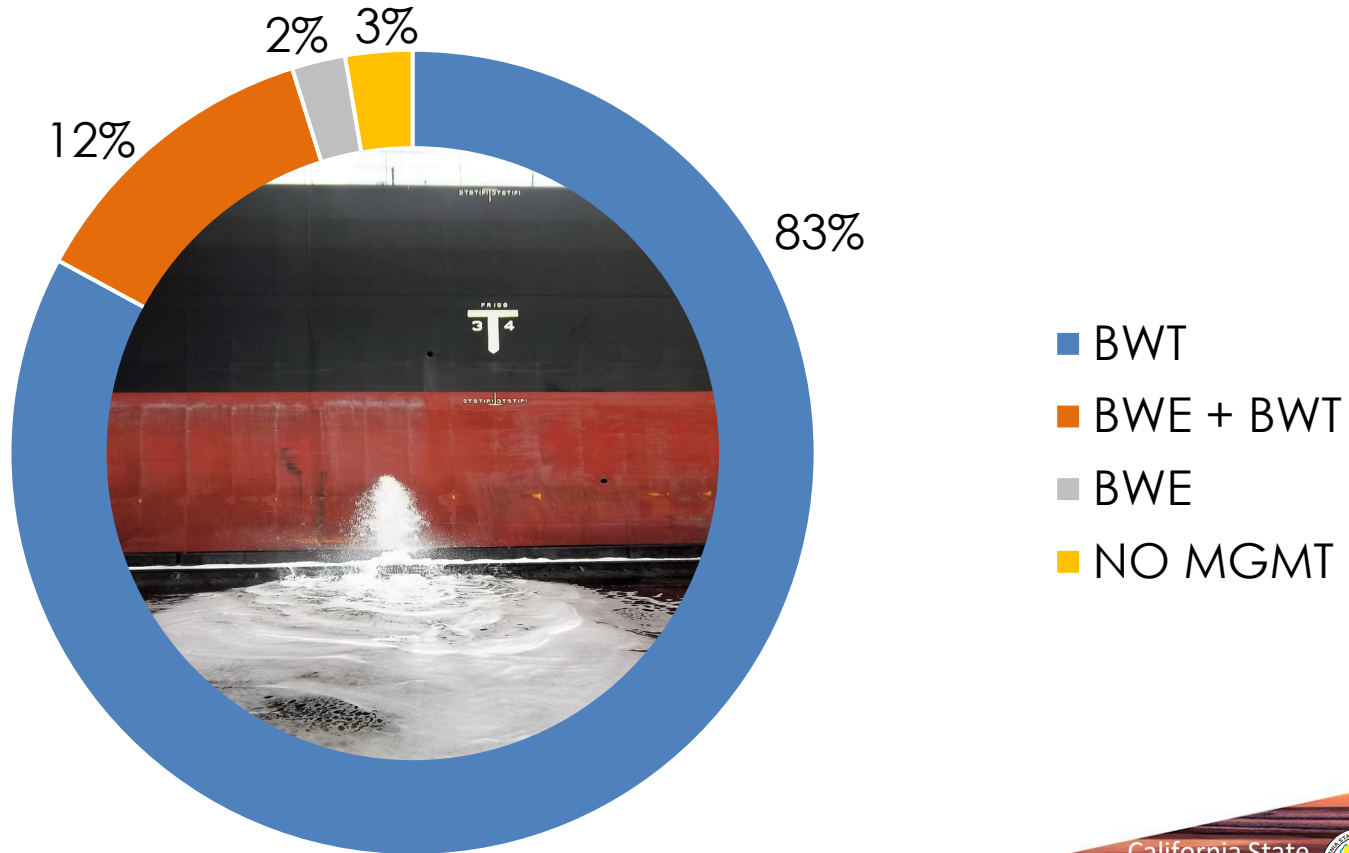
Location	% of last 10 ports within Location
WA	1.90
AK	0.54
HI	0.49
OR	0.44
Mexico	4.72
Canada	2.23

Location	% of last 10 ports within Location
China	15.05
Japan	7.39
US Other	7.38
Korea	5.88
Singapore	4.85

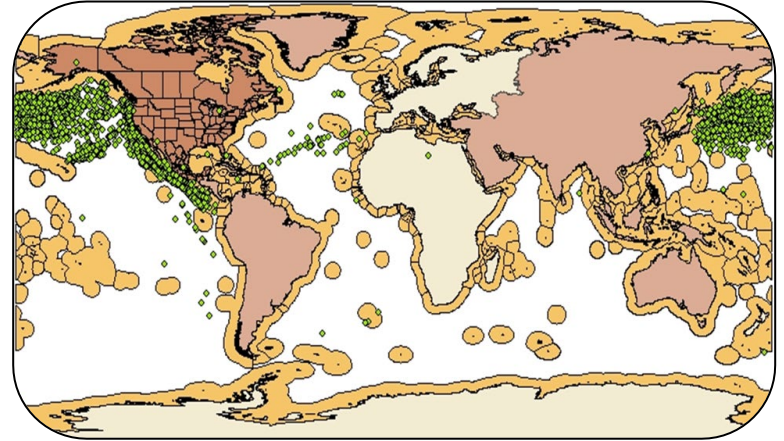
2023 Vessel Statistics – Ballast Discharge



2023 Ballast Water Management Strategies



2023 MISP Enforcement: Assessing Compliance



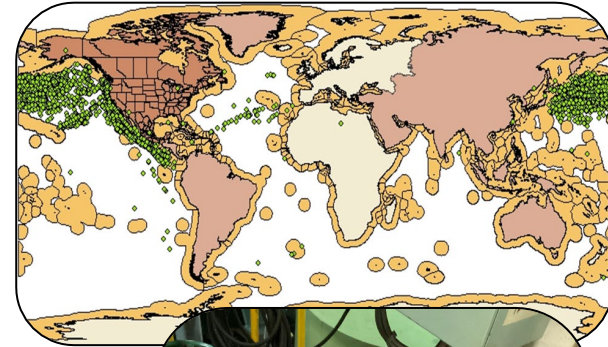
2023 MISP inspections:

- 19% of all arrivals
- 26% of *inspectable* arrivals

GIS analysis of all discharged tanks

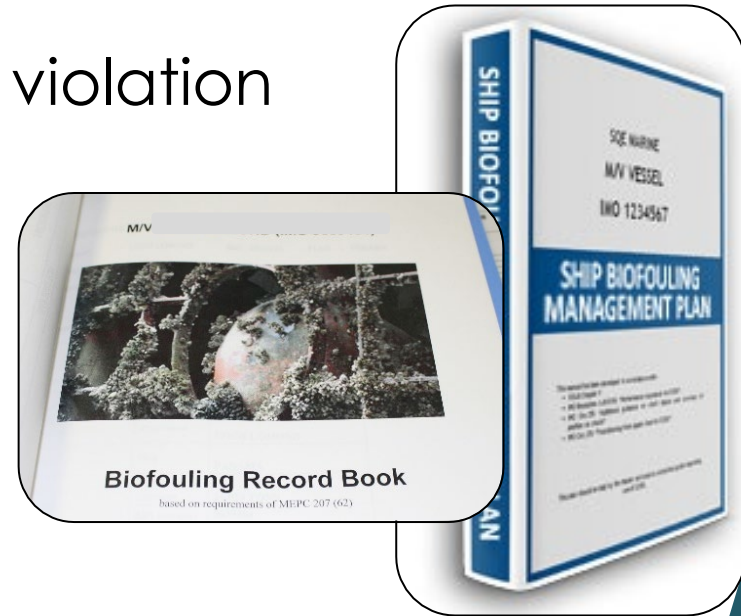
2023 MISP Enforcement – Highlights

- 10.1 million metric tons of ballast water discharged
 - 2.5% compliant via exchange
 - 1.4% compliant via source location
 - 0.02% noncompliant
 - 96.1% compliant* via treatment



MISP Enforcement – 2023 Highlights

- Ballast Water violations:
 - 2 management violations
 - 1 performance standards violation
 - 1 exchange violation
 - 41 recordkeeping
 - 112 reporting
- Biofouling violations:
 - 126 recordkeeping
 - 122 60-day grace periods
 - 4 Notices of Violation
 - 47 reporting



MISP Updates



Regulatory Changes – Amend Article 4.9 Enforcement Regulations

What: Include violations of biofouling management requirements and ballast water discharge performance standards

When: Plan to release for public comment this spring

Why: Set up transparent process for assessing penalties for biofouling and ballast water discharge performance standards violations

2023 Ballast Water Sampling



2023 Settlements

What: Commission staff settled with two vessels for violations occurring in late 2022

Violations: Exchanges at less than required distance from land

Settlement amount: Settlements totaled \$82,800

Regulatory Changes:

Amend Article 4.8 Biofouling Management

What: Update references to IMO Biofouling Guidelines (2011 vs 2023) and Improve Annual Vessel Reporting Form questions.

When: Aiming for public comment period later in 2024

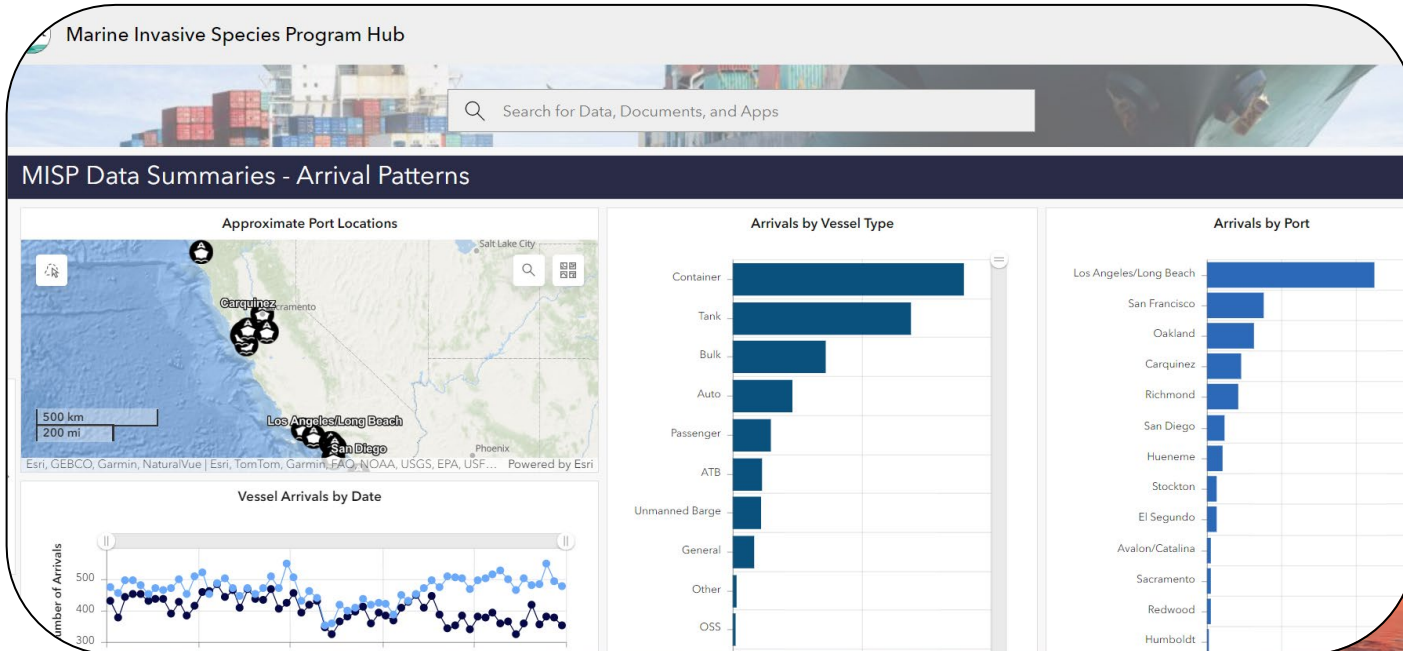
Why: Incorporate IMO Biofouling Guidelines changes and improve biofouling management and ballast water treatment system data collection

2023 MISP Accomplishments



2023 MISP Accomplishments: Public Data Dashboard

- Posted quarterly
- Current year and historical data




DATA SUMMARIES



2023 MISP Accomplishments: Peer-Reviewed Publications

 Frontiers in Marine Science

TYPE Policy Brief
PUBLISHED 11 August 2023
DOI 10.3389/fmars.2023.1239723


 Check for updates

Balancing the consequences of in-water cleaning of biofouling to improve ship efficiency and reduce biosecurity risk


Chris Scianni^{1*}, Eugene Georgiades², Ralitsa Mihaylova³ and Mario N. Tamburri⁴

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<https://www.frontiersin.org/articles/10.3389/fmars.2023.1239723/full>

 Frontiers in Marine Science

TYPE Policy Brief
PUBLISHED 07 June 2023
DOI 10.3389/fmars.2023.1197366


 Check for updates

Biofilms associated with ship submerged surfaces: implications for ship biofouling management and the environment

Eugene Georgiades¹, Chris Scianni² and Mario N. Tamburri^{3*}

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<https://www.frontiersin.org/articles/10.3389/fmars.2023.1197366/full>

 **Biofouling**
The Journal of Bioadhesion and Biofilm Research

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/gbif20>

Biofouling occlusion of ships' internal seawater systems: operational, economic, and biosecurity consequences

Ian Davidson, Patrick Cahill, Arne Hinz, Robert Major, Daniel Kluza, Chris Scianni & Eugene Georgiades

<https://www.tandfonline.com/doi/abs/10.1080/08927014.2023.2225411?journalCode=gbif20>

MOLECULAR ECOLOGY

ORIGINAL ARTICLE |  Open Access | 

Environment and shipping drive environmental DNA beta-diversity among commercial ports

Jose Andrés, Paul Czechowski, Erin Grey  Mandana Saebi, Kara Andres, Christopher Brown, Nitesh Chawla, James J. Corbett, Rein Brys, Phillip Cassey, Nancy Correa, Marty R. Deveney, Scott P. Egan, Joshua P. Fisher, Rian vanden Hooff, Charles R. Knapp, Sandric Chee Yew Leong, Brian J. Neilson, Esteban M. Paolucci, Michael E. Pfrender, Meredith R. Pochardt, Thomas A. A. Prowse, Steven S. Rumrill, Chris Scianni, Francisco Sylvester, Mario N. Tamburri, Thomas W. Therriault, Darren C. J. Yeo, David M. Lodge ... [See fewer authors](#) ^

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<https://onlinelibrary.wiley.com/doi/full/10.1111/mec.16888>

2023 MISP Accomplishments: IMO GloFouling Training



Rio de Janeiro, Brazil



Mexico City, Mexico



Guayaquil, Ecuador

Looking Ahead



Looking ahead to 2024 and beyond

- Implementing enhanced enforcement regulations
 - Treated ballast water sampling
 - Biofouling violations
- 2025 Biennial Report to CA Legislature
- CSU Council on Ocean Affairs, Science, and Technology (COAST) summer internships
- VIDA
- MISP 25th Anniversary!



www.slc.ca.gov

THANK YOU & QUESTIONS

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