

Ballast Water Treatment System Use in California

MARCH 30, 2016

JONATHAN THOMPSON

CALIFORNIA STATE LANDS COMMISSION

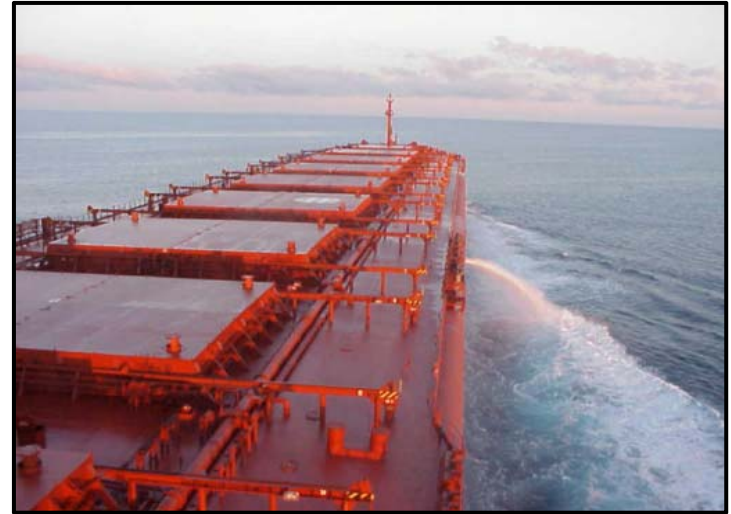
MARINE FACILITIES DIVISION

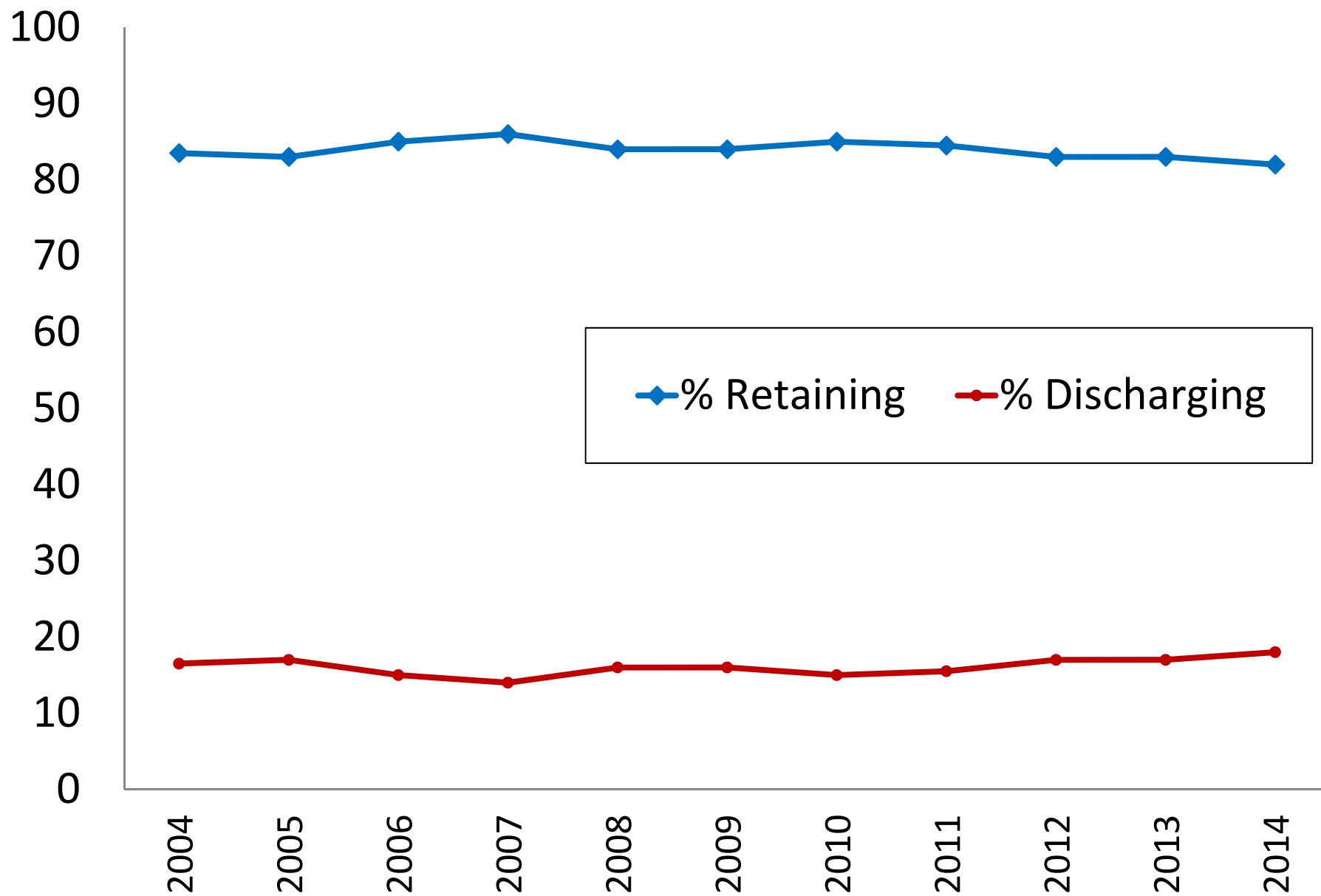
MARINE INVASIVE SPECIES PROGRAM



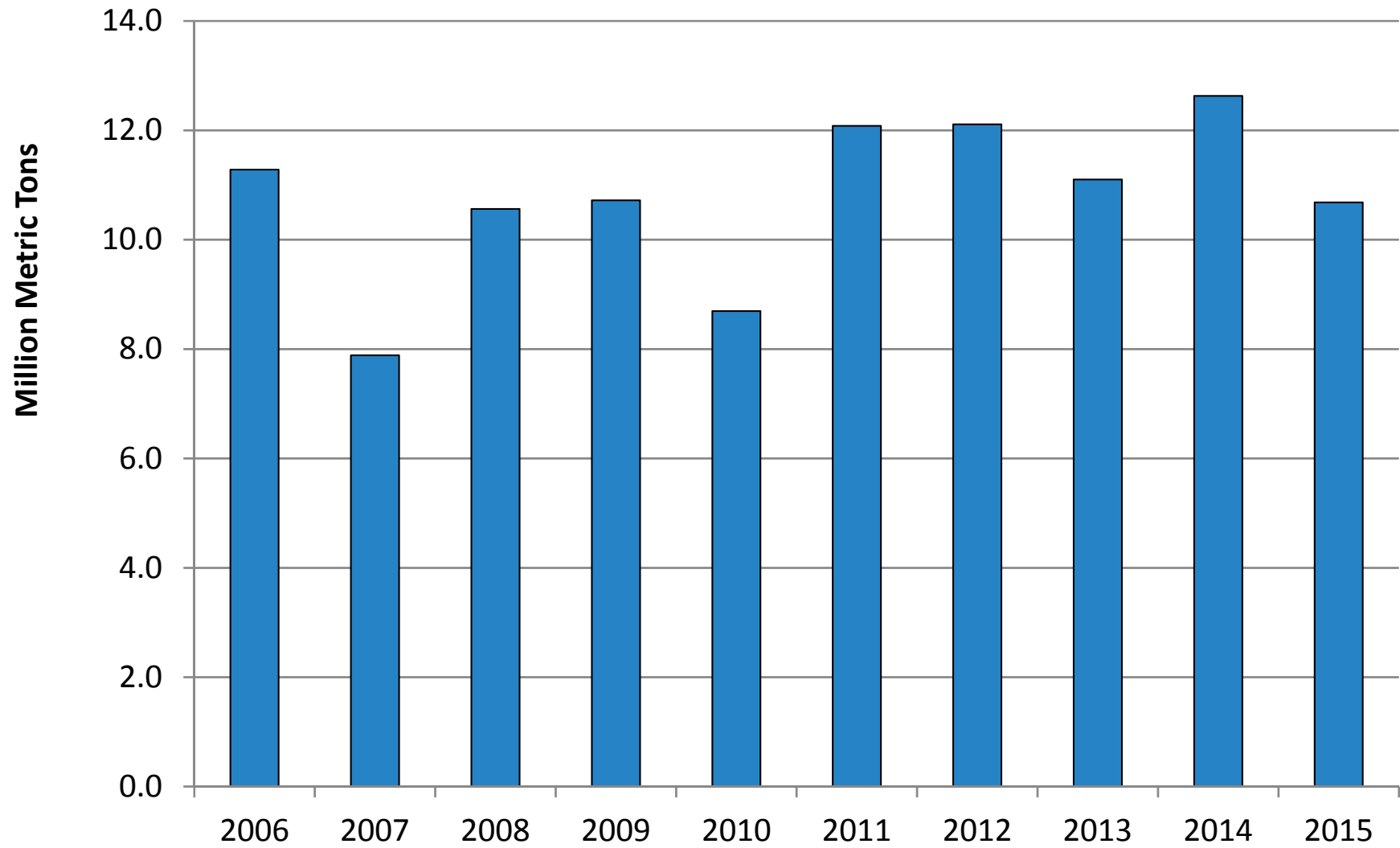
Ballast Water Management Options

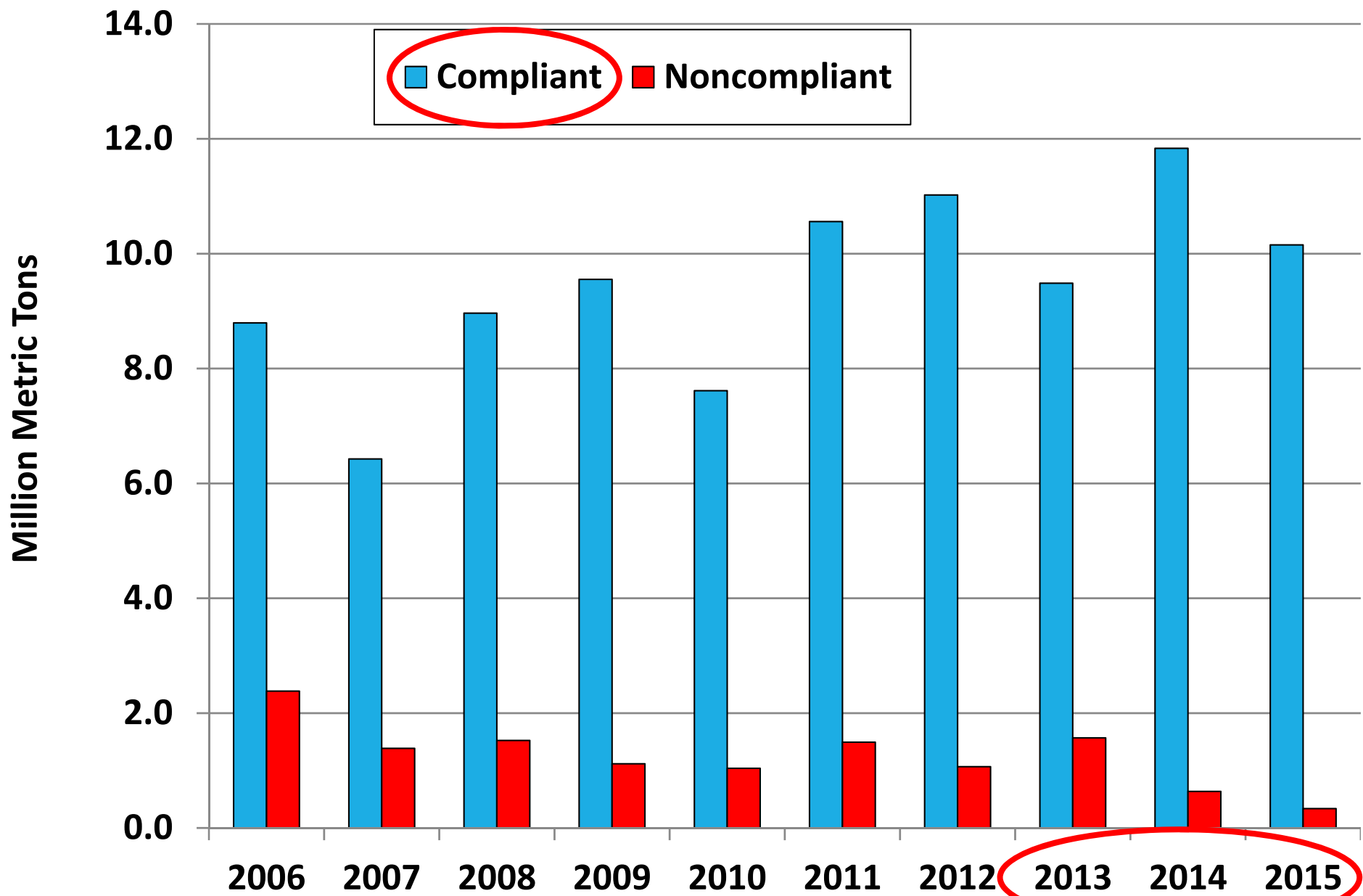
- Retain all ballast on board/no discharge
- Discharge to a shore or barge-based reception facility (none currently exist)
- Ballast water exchange (BWE)
 - 200 NM from land (non-PCR arrivals)
 - 50 NM from land (PCR arrivals)
- On board ballast water treatment systems



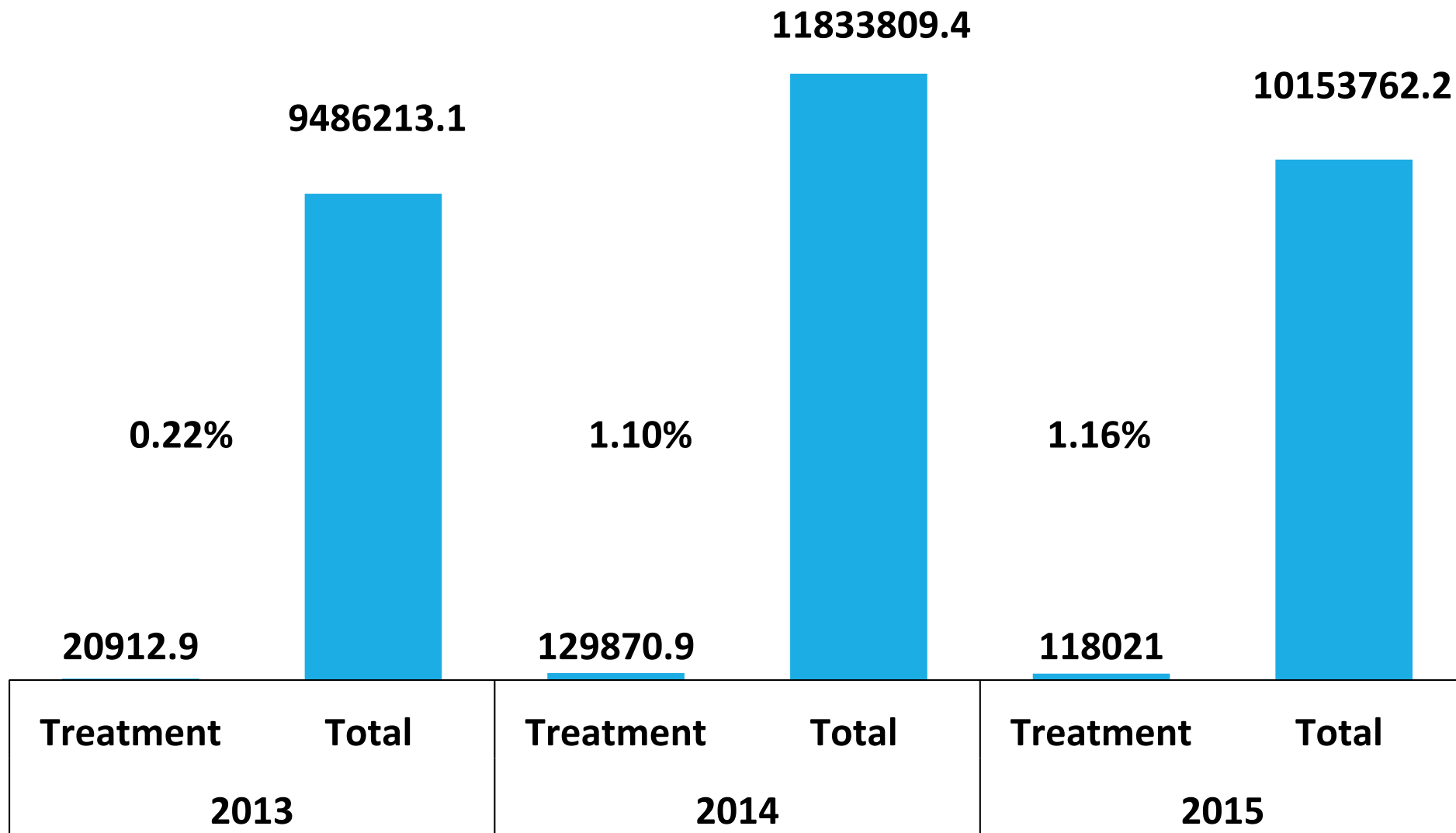


Total Discharge






Total Compliant BW Discharged (mt)



Collection of Data

- Annual Form
- Supplemental Form
- USCG Form



California State Lands Commission
Ballast Water Treatment Supplemental Reporting Form
 Public Resources Code Section 71205(g)
 July 1, 2010
ALL VESSELS MUST ALSO SUBMIT BALLAST WATER REPORTING FORM

IS THIS AN AMENDED REPORTING FORM? Yes ☐ No ☐

Vessel Information	Voyage Information
Vessel Name: <input type="text"/>	Arrival Port: <input type="text"/>
Official/IMO Number: <input type="text"/>	Arrival Date (DD/MM/YYYY): <input type="text"/>

Ballast Water Treatment

1. Did the treatment system experience any malfunction that affected the treatment of ballast water to be discharged at this arrival port?

Yes ☐ , please provide the following information:

Date of malfunction (DD/MM/YYYY):

Explain the malfunction:

If applicable, how was the situation resolved?

No ☐

2. Ballast Water Treatment History. Provide information for all ballast tanks that will be discharged at arrival port. Enter additional tanks on page 2. One tank per line. If none, go to Question #3.

Tanks/ Holds	BW Source			BW Discharge			BW Treatment		
	Date (DD/MM/YY)	Port or Lat-Long	Volume (Units)	Date (DD/MM/YY)	Port or Lat-Long	Volume (Units)	Date of 1st treatment (DD/MM/YY)	Date 2nd treatment (if applicable) (DD/MM/YY)	Volume Ballast Treated (Units)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input style="background-color: #e0e0ff; border: 1px solid #ccc; border-radius: 2px; padding: 2px; text-align: center;" type="text"/> m3	<input type="text"/>	<input type="text"/>	<input style="background-color: #e0e0ff; border: 1px solid #ccc; border-radius: 2px; padding: 2px; text-align: center;" type="text"/> m3	<input type="text"/>	<input type="text"/>	<input style="background-color: #e0e0ff; border: 1px solid #ccc; border-radius: 2px; padding: 2px; text-align: center;" type="text"/> m3
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Ballast Water Tank Codes: Forepeak = FP, Aftpeak = AP, Double Bottom = DB, Wing = WT, Topside = TS, Cargo Hold = CH, Other = O

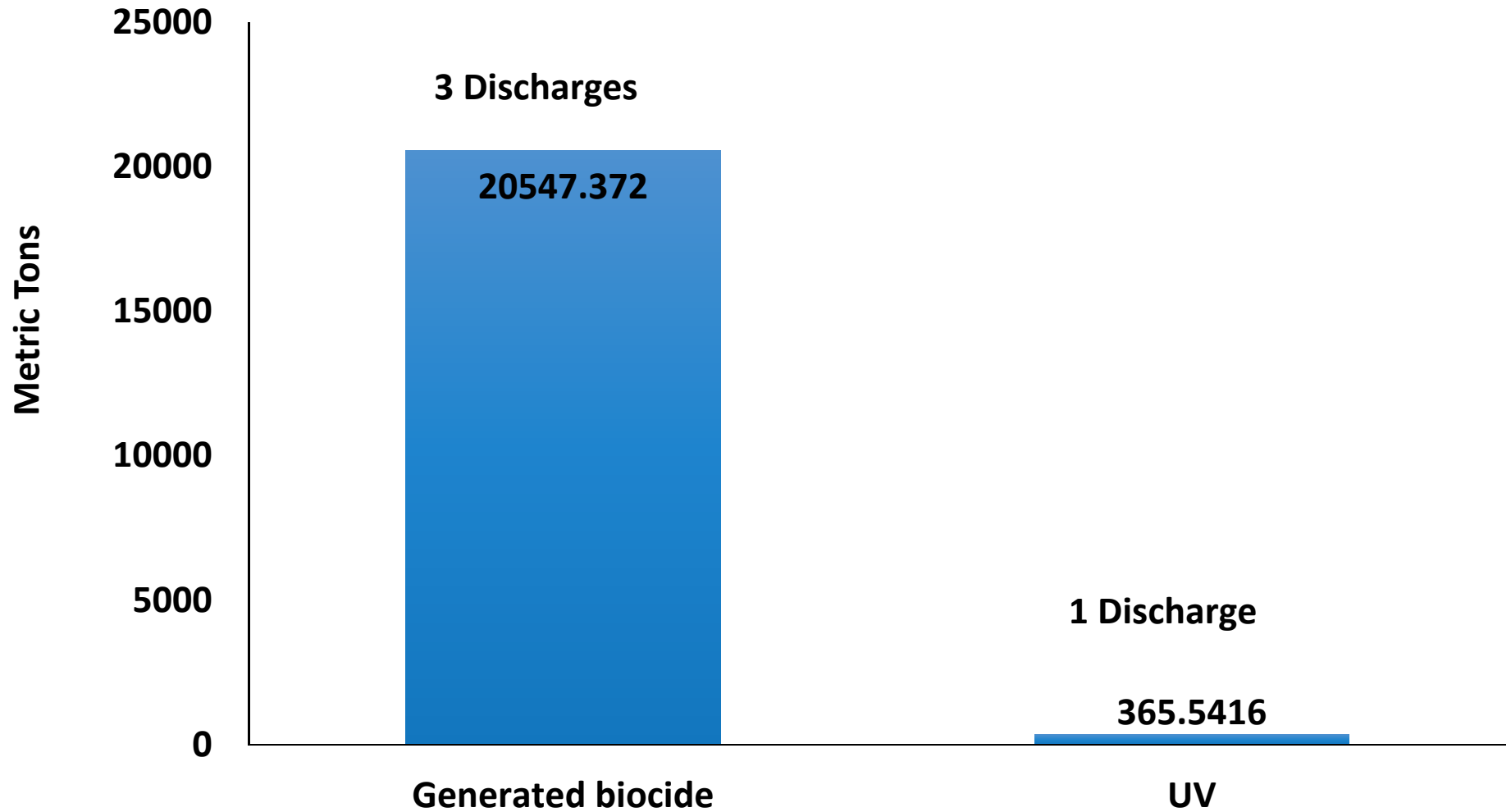
3. Responsible Officer's Name and Title:

1



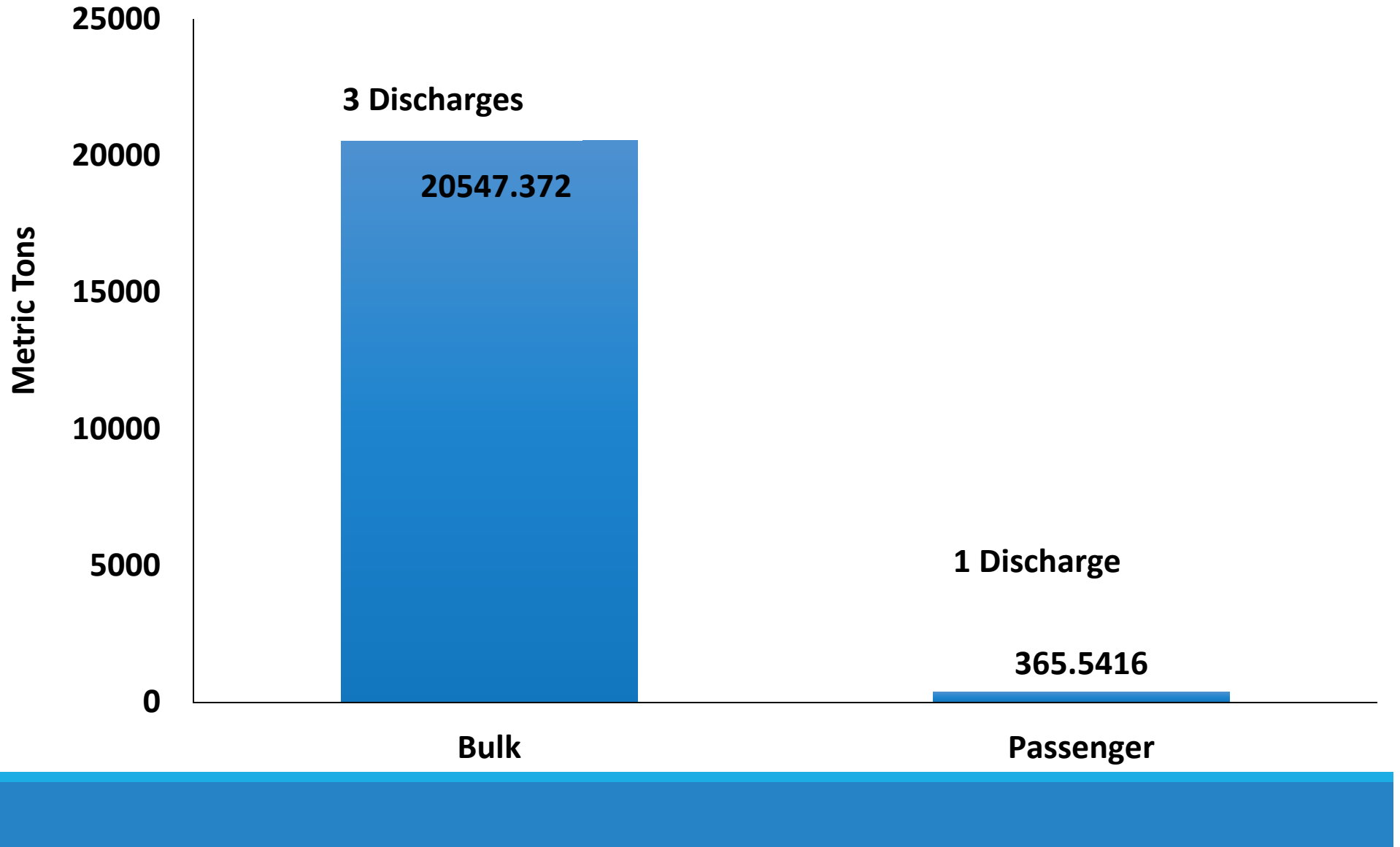
Ballast Water Treatment System Use

2013 Volume Discharged by Treatment Type



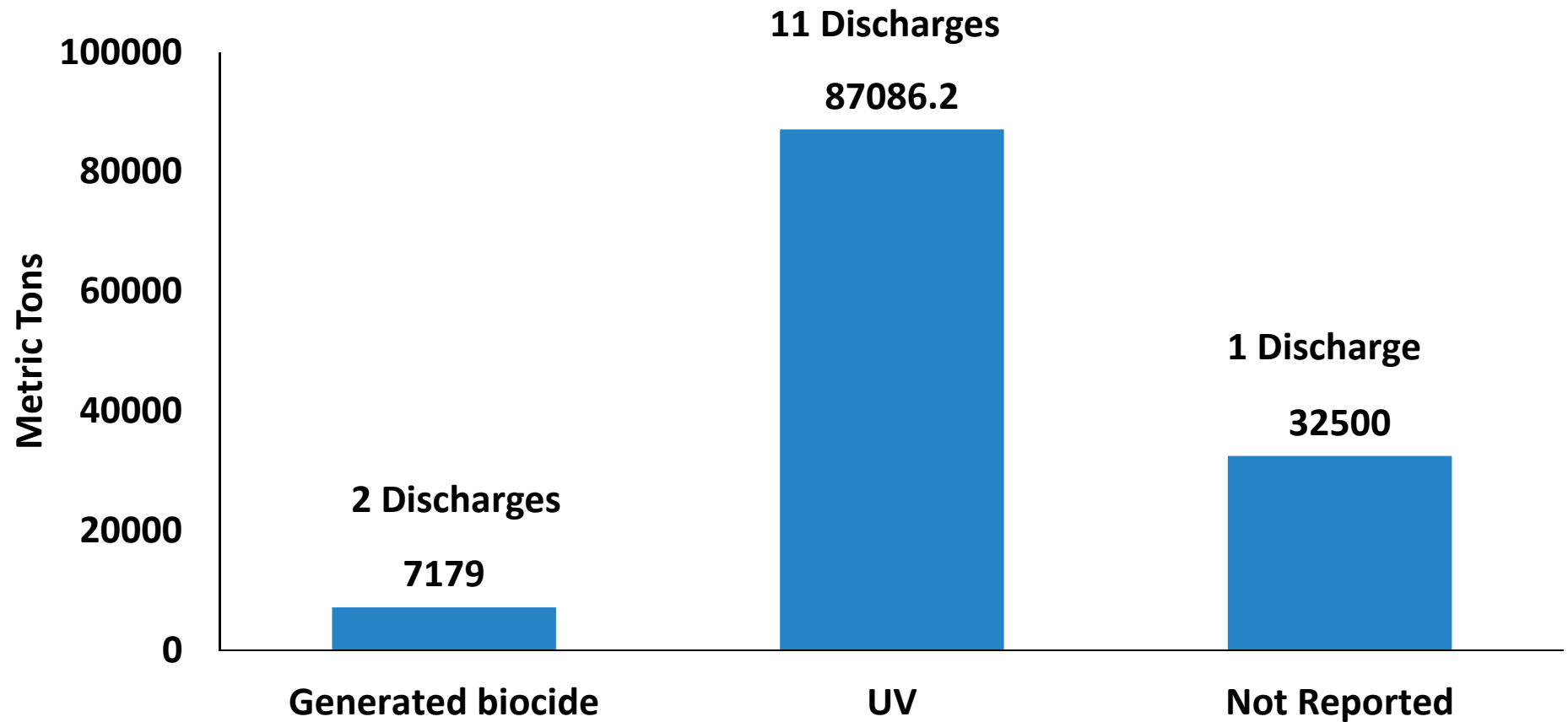
Ballast Water Treatment System Use

2013 Volume Discharged by Vessel Type



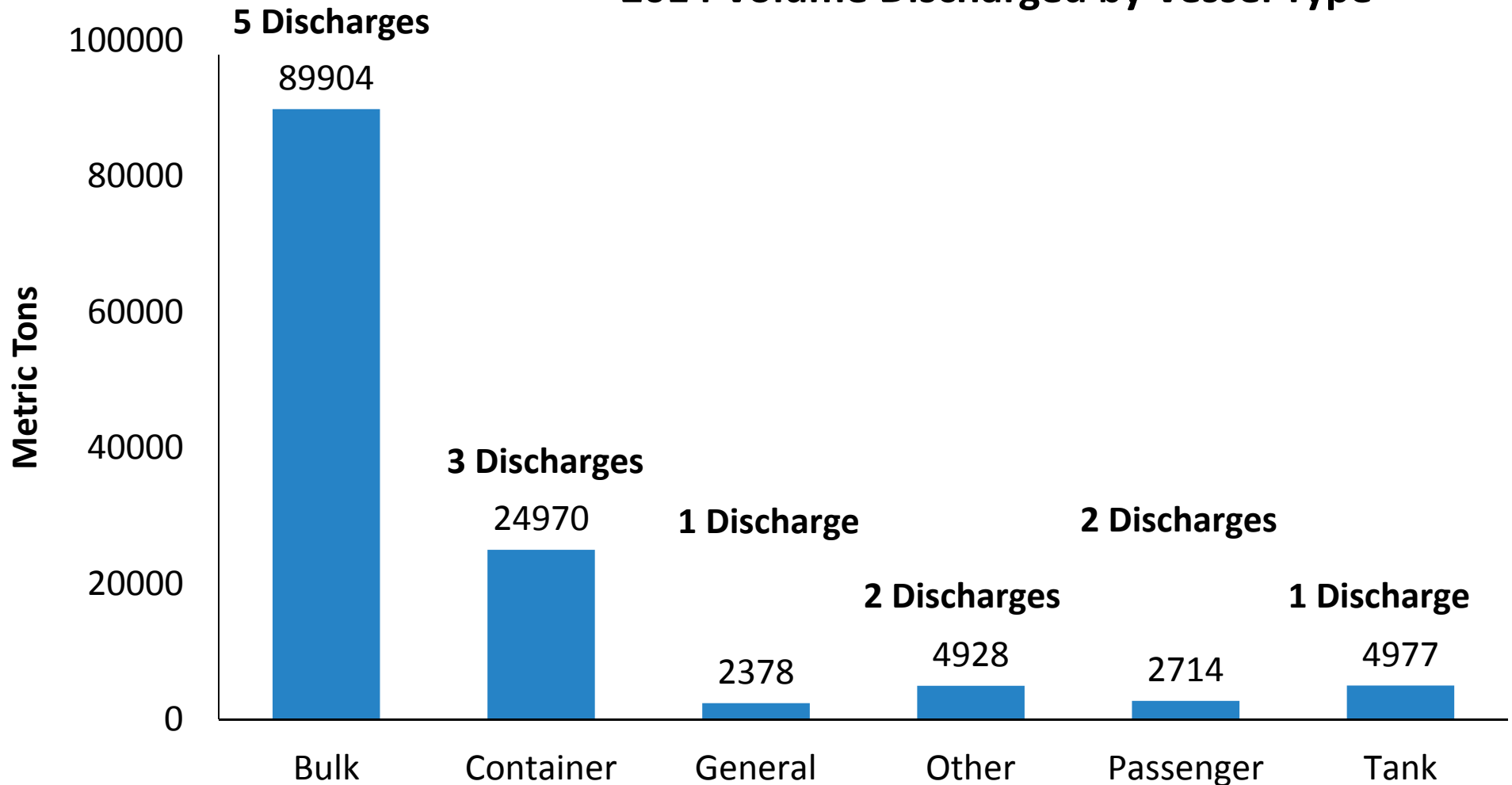
Ballast Water Treatment System Use

2014 Volume (mt) Discharged by Treatment Type



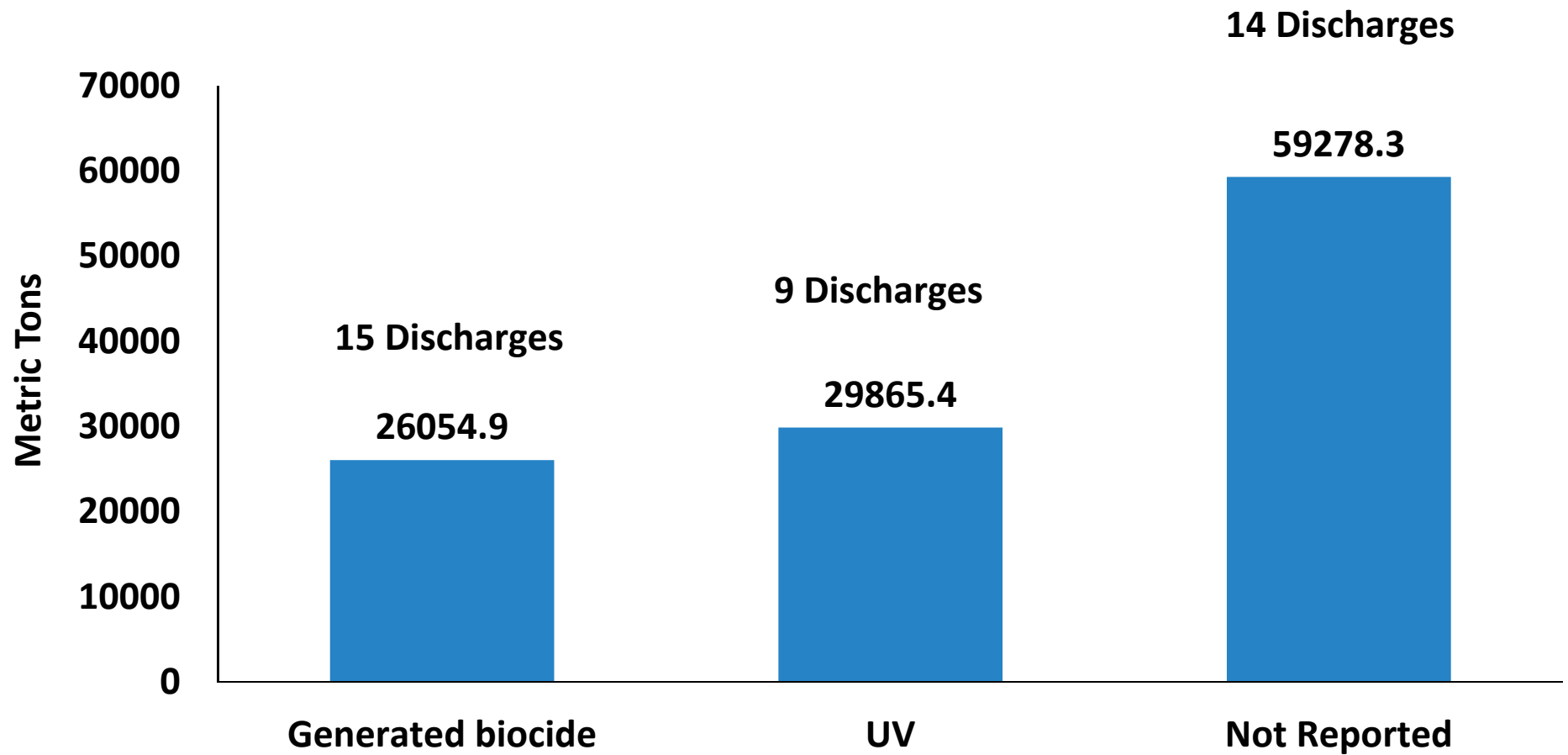
Ballast Water Treatment System Use

2014 Volume Discharged by Vessel Type



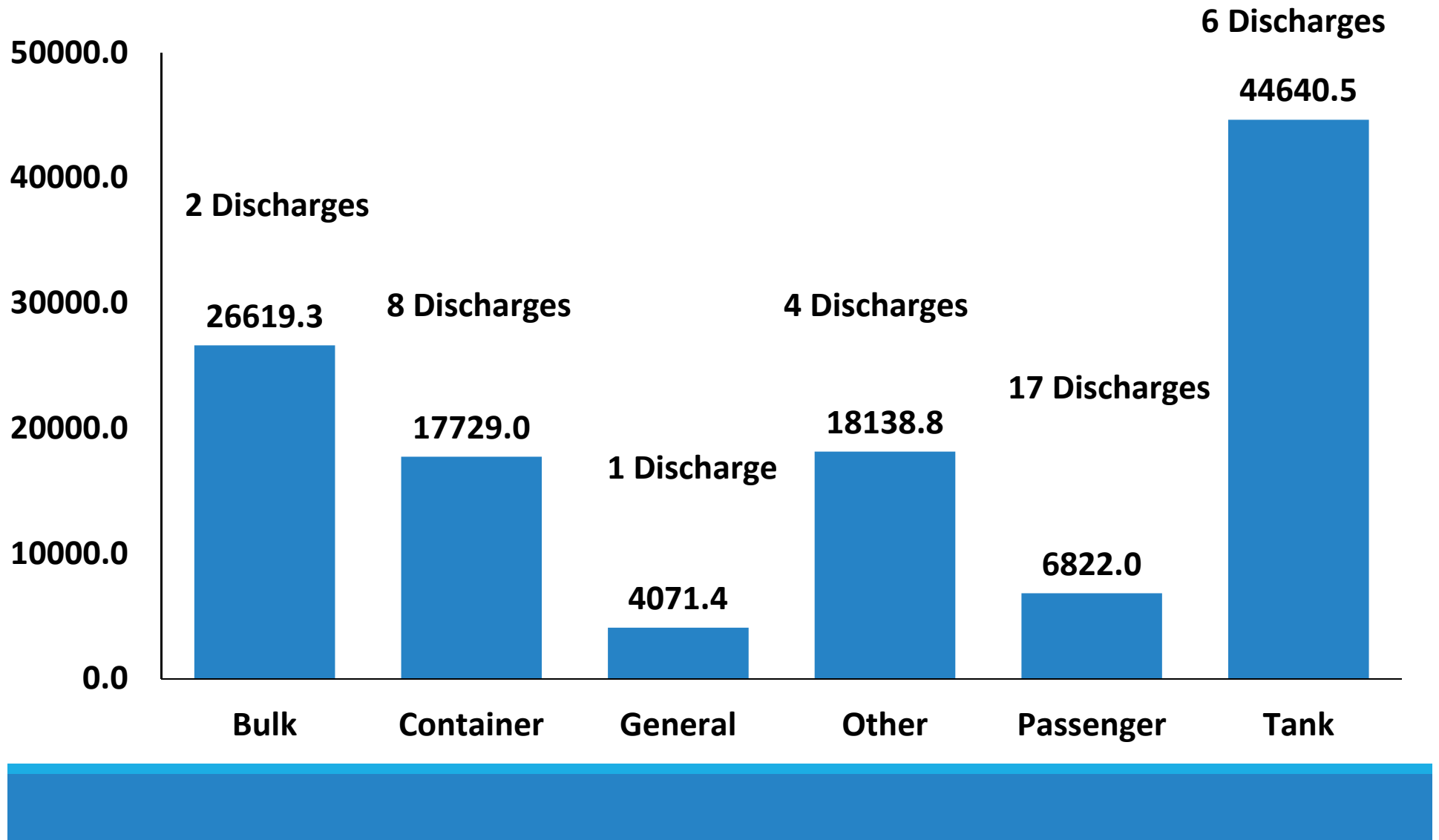
Ballast Water Treatment System Use

2015 Volume Discharged by Vessel Type

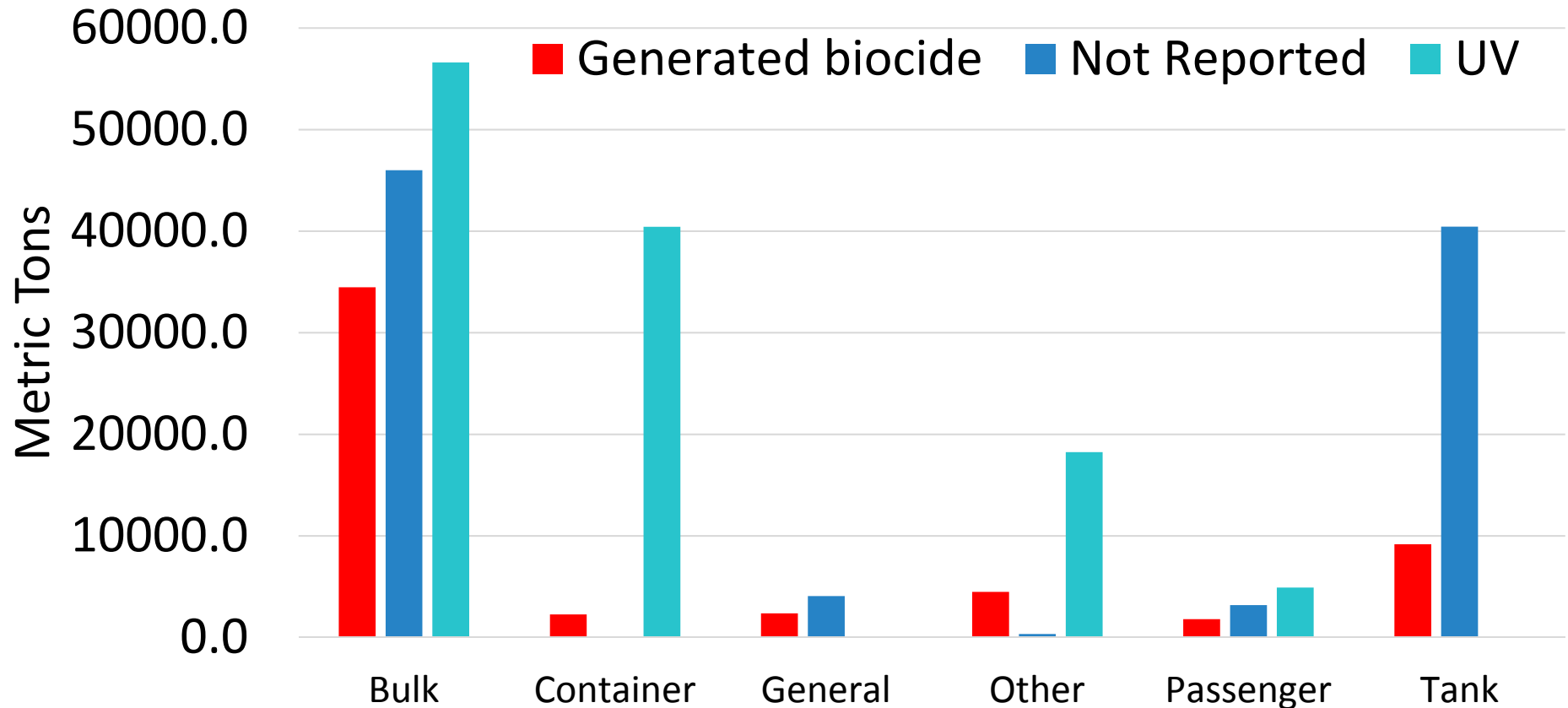


Ballast Water Treatment System Use

2015 Volume (mt) Discharged by Vessel Type

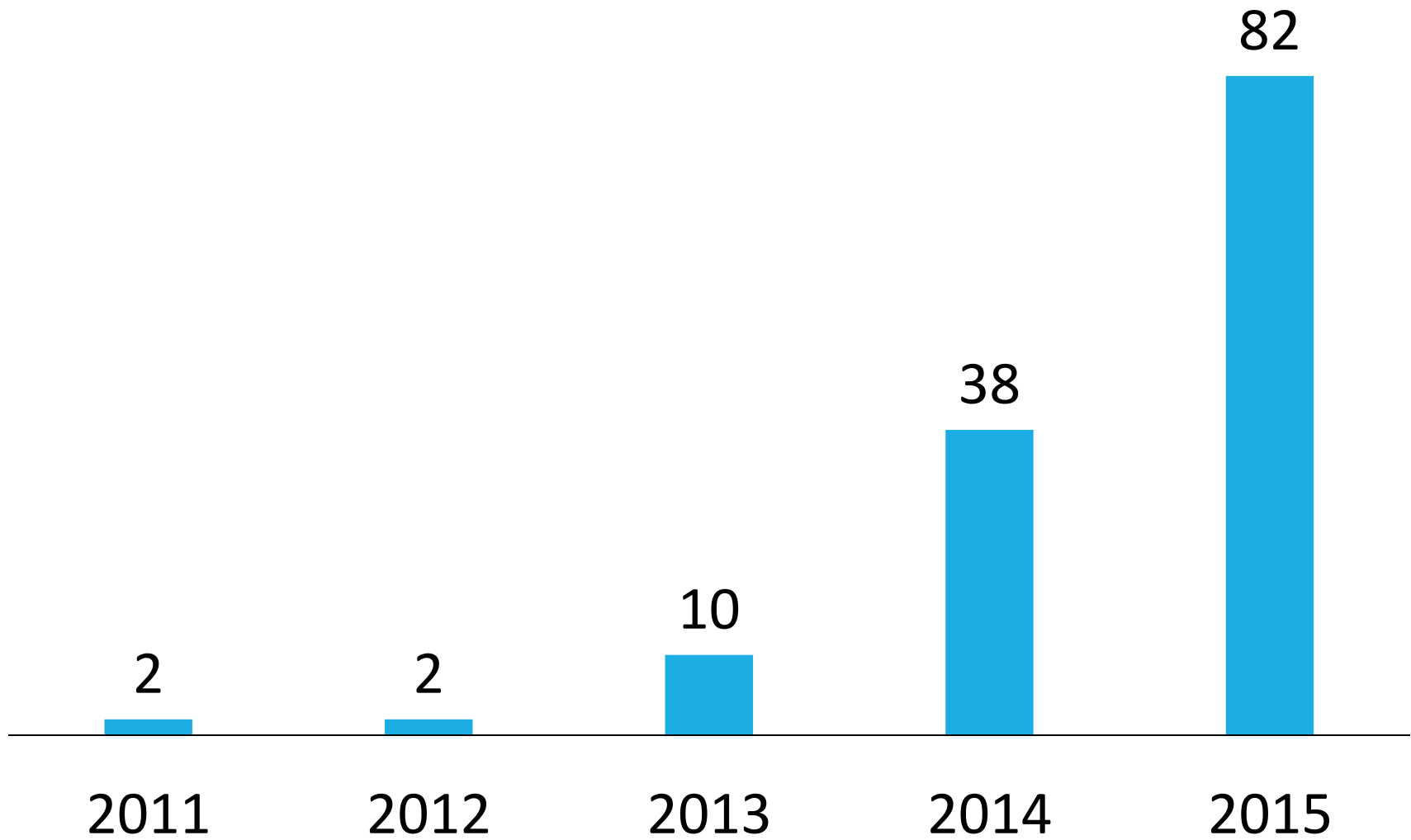


2013-2015 BW Discharged



Generated biocide	3	1	1	1	2	3
Not Reported	2		1	1	1	2
UV	4	4		2	6	

Vessels Reporting Newly Installed BWTS



System Manufacturer	Treatment Type	
	Generated Biocide	UV
Alfa Laval		13
China Ocean Shipping Company (COSCO)		3
Ecochlor	3	
ERMA FIRST ESK Engineering Solutions S.A.	2	
Evoqua	1	
Hyde Marine Inc.		12
Hyundai Heavy Industries Co. Ltd.	8	1
JFE Engineering Corp.	3	
Mahle Industrial Filtration		1
Miura		1
OptiMarin		27
Panasia Co. Ltd		15
Qingdao Headway Technology Co. Ltd.	2	
RWO Marine Water Technology	2	
Samsung Heavy Industries Co., Ltd.	3	
Severn Trent De Nora	4	
Sunrui Marine Environment Eng. Co.	3	
Techcross Co. Ltd.	24	
Wuxi Brightsky Electronic Co. Ltd.		6

Ballast Water Treatment Technology

- Continue to collect data prior implementation of BWPS
- Changes to reporting requirements and forms
- Compare our data with EPA data
- Assess ballast water treatment system capabilities
- Develop sample collection and sample assessment protocols

Shore-Based Treatment Feasibility Study

- Feasibility study of shore-based ballast water reception and treatment facilities in California
 - Managed by the Delta Stewardship Council
 - For more info <http://deltacouncil.ca.gov/>

