California’s Marine Invasive Species Program

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CALIFORNIA STATE LANDS COMMISSION
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Topics of Discussion

2017 Biennial Report
New and Proposed Regulations
Research
Modernization and Efficiency Efforts
2017 Biennial Report
Vessel Arrivals at CA Ports

![Bar chart showing vessel arrivals at CA ports from 2004 to 2016. The number of arrivals fluctuates between 9000 and 13000.](image)
Ballast Water Management

- % Retaining
- % Discharging

Graph showing the percentage of retaining and discharging ballast water from 2006 to 2016.
Ballast Water Discharge

- Avg. = ~10.7 MMT per year
Discharge by Vessel Type

- Bulk: 46%
- Tank: 40%
- Unmanned Barge: 5%
- Auto: 0%
- Passenger: 2%
- Other: 1%
- General: 1%
- Container: 5%
Compliant vs. Noncompliant

Discharge Volume (MMT)

- **Compliant**
- **Noncompliant**

![Bar chart showing discharge volume from 2006 to 2016, with percentages of noncompliant cases noted for 2014 (14%) and 2016 (1.7%).]
Enhanced Compliance Assessment

**% of Noncompliant Volume Discharged**

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>16</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Number of Violations**

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>140</td>
<td>120</td>
<td>60</td>
</tr>
</tbody>
</table>
# Vessel Inspections

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Arrivals</td>
<td>9345</td>
<td>9065</td>
<td>9164</td>
</tr>
<tr>
<td>Total Inspected</td>
<td>2442</td>
<td>2373</td>
<td>2313</td>
</tr>
<tr>
<td>Percent Inspected</td>
<td>26%</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>Violations</td>
<td>28</td>
<td>23</td>
<td>15</td>
</tr>
</tbody>
</table>
Ballast Water Treatment
Age of Coatings

![Bar chart showing the average percent of vessels for different coating age ranges (Years):<br>- <1<br>- 1 - < 2<br>- 2 - < 3<br>- 3 - < 4<br>- 4 - < 5<br>- 5+](chart.png)
In-Water Cleaning

![Bar chart showing the number of vessels undergoing in-water cleaning from 2007 to 2014, with categories for Unknown, Other Coatings, FR and Biocidal, Foul-Release Only, and Biocidal Coating Only.]
New and Proposed Regulations
ARTICLE 4.5 - Marine Invasive Species Control Fund Fee

• Balance of the Marine Invasive Species Control Fund determined to be insufficient to fund the MISP into the future

• Rulemaking approved by Commission in December 2016
  • Approved and filed with Sec of State - February 28, 2017
  • Implementation date - April 1, 2017

• Fee of increased from $850 to $1,000 per qualifying arrival
ARTICLE 4.9 - Marine Invasive Species Act Enforcement and Hearing Process

Purpose: To establish policies and procedures CSLC shall undertake in assessing and commencing administrative enforcement actions pursuant to CA Public Resources Code section 71216 and the steps the cited party shall take to address the actions.

• Approved by the Commission in August 2016
• Filed with Secretary of State on March 21, 2017
• Implementation - July 1, 2017
ARTICLE 4.9 - Marine Invasive Species Act Enforcement and Hearing Process

1. Class 1 (operational)
   • **Minor** – vessel incorrectly exchanges ballast water within 10% of required distance
   • **Moderate** – vessel incorrectly exchanges ballast water within 10-50% of req. distance
   • **Major (I)** – vessel incorrectly exchanges ballast water less than 50% of req. distance
   • **Major (II)** – vessel does not exchange water before discharge at CA port

2. Class 2 (administrative)
   • Vessel fails to properly maintain required documents on board (e.g. ballast water handling log)

3. Class 3 (administrative)
   • Vessel fails to submit required reporting form (e.g. Ballast Water Management Report)

Will be updated to incorporate vessel biofouling and discharge standards as appropriate
4.8 Biofouling

Recordkeeping and reporting
- Biofouling management plan, log book

Best preventive practices
- Coatings within effective lifespan
- Niche areas management

High-risk vessels
- Extended residency periods
ARTICLE 4.8 - Biofouling Management to Minimize the Transfer of Nonindigenous Species from Vessels Arriving at California Ports

- Publication of proposed rule - Nov 25, 2016
  - 45-day public comment period
  - Public hearing - January 10, 2017, Port of Long Beach

- Publication of revised text
  - 15 - day public comment period - closed Feb 04, 2017

- Next steps: Finalize and present to Commission on April 20, 2017

- Availability of rulemaking documents:
  - www.slc.ca.gov
  - CSLC offices - Sacramento and Long Beach
ARTICLE 4.7: Performance Standards and Compliance Assessment Protocols for the Discharge of Ballast Water for Vessels Operating in California Waters

Purpose: (1) Codifies delay in implementation of interim and final ballast water standards. (2) To develop protocols to assess vessel compliance with ballast water discharge performance standards.

Informal Comment Period (February 7 – March 24, 2017)
• Availability of rulemaking documents
  • www.slc.ca.gov
  • CSLC offices – Sacramento and Long Beach
Proposed Compliance Assessment Protocols

Employ a Tiered Approach

• Paperwork, calibration, functionality
• Indicative Sampling
• Full scale testing
ARTICLE 4.6: Ballast Water Management Regulations

- Retain all ballast on board/no discharge (~84%)
- Use of approved alternative ballast water management (e.g. AMS)
- Discharge to a shore-based reception facility (none currently exist, feasibility study expected mid-2017)
- Exchange
ARTICLE 4.6: Ballast Water Management Regulations

Regulatory Package:

• Adopt regulations for management of ballast water for vessels arriving from outside of the Pacific Coast Region or carrying ballast water from outside the Pacific Coast Region
• Investigate continuation of ballast water exchange for vessels arriving at California’s freshwater ports after the implementation of discharge standards
• Ballast water reception facility approval process

Rulemaking process to begin late 2017
Research
Ballast Water

Shore-based ballast water treatment feasibility study
- Delta Stewardship Council (Project manager)
- Glosten Associates (Contractor)

Enumerating viruses in ballast water
- Michigan State University

Invasive zooplankton of California estuaries
- Washington State University
Biofouling

Vessel biofouling and invasions: evaluating biofouling introduction risks under lay-up conditions in marine systems
  ◦ Smithsonian Environmental Research Center

Assessing role of copper tolerance in biofouling invasion risk
  ◦ San Jose State University
Efficiency of Operations

Map business processes, eliminate redundancies
Update risk prioritization matrix
Modernize data collection process
Consolidate reporting forms
GIS model automation
Industry outreach
Thank you!

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