California’s Marine Invasive Species Program

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California State Lands Commission
Pacific Ballast Water Group
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CA Marine Invasive Species Program

- 1999 Ballast Water Management for Control of Nonindigenous Species Act
- 2003 Marine Invasive Species Act
- Partner Agencies:
  - California Department of Fish & Wildlife
  - California Water Boards
  - California State Board of Equalization
Marine Invasive Species Program Resources

• Funding
  – $850 per vessel voyage fee for first arrival to CA
  – Fee supports Commission and partner agencies

• Commission staffing of MISP
  – Four program admin (manager, scientists)
  – Six data management/admin
  – Vessel Inspections
    • Two Marine Safety Specialists (N. and S. CA)
      – Coordinate vessel inspection process
    • 22 personnel cross-trained in marine invasive species management and oil transfer activities
2013 Biennial Report

- Regulatory overview: state, federal, international
- MISP activities
- Ballast water and biofouling management data analysis
- Funded and collaborative research
- Review of scientific literature
- Looking forward
BALLAST WATER MANAGEMENT

Photo courtesy of Smithsonian Environmental Research Center
BW Reporting Form Compliance

97% compliant
88% on time
Qualifying Arrivals

Number of Qualifying Voyages (QVs)

Year

Arrivals by Port

Jan – Jun 2011
Last Port of Call

The bar chart shows the distribution of ports of call for QVs. California has the highest percentage, followed by other destinations with varying levels of frequency.

- California: 35% of total QVs
- China (Foreign): 10% of total QVs
- Korea: 5% of total QVs
- Washington: 5% of total QVs
- Central America: 5% of total QVs
- Japan: 5% of total QVs
- Canada: 5% of total QVs
- Mexico (Coastal): 5% of total QVs
- Other Asia: 5% of total QVs
- South America: 5% of total QVs
- Pacific North West: 5% of total QVs
- Hawaii: 5% of total QVs
- Oregon: 5% of total QVs
- Other: 5% of total QVs

This data suggests that California is the most frequent port of call, followed by China and other regions.
Reported Ballast Water Management
## Type of Vessels Discharging

<table>
<thead>
<tr>
<th>Vessel Type</th>
<th>Avg # of QVs Per 6 Month Period</th>
<th>Avg # Discharging Per 6 Month Period</th>
<th>% Discharging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>358</td>
<td>5</td>
<td>1.4%</td>
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<tr>
<td>Bulk</td>
<td>345</td>
<td>174</td>
<td>50.4%</td>
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<tr>
<td>Container</td>
<td>2269</td>
<td>136</td>
<td>6.0%</td>
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<tr>
<td>General</td>
<td>179</td>
<td>31</td>
<td>17.3%</td>
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<tr>
<td>Other</td>
<td>51</td>
<td>6</td>
<td>11.8%</td>
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<tr>
<td>Passenger</td>
<td>224</td>
<td>35</td>
<td>15.6%</td>
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<tr>
<td>Tank</td>
<td>989</td>
<td>248</td>
<td>25.1%</td>
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<tr>
<td>Unmanned Barge</td>
<td>263</td>
<td>75</td>
<td>28.5%</td>
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</tbody>
</table>
Per vessel discharge volume increasing
Non-Compliant Discharges

- Exchanged in Wrong Location
- Did Not Exchange
- Exchange Location Unknown

Noncompliant Ballast Water Discharged (MMT)

- 2010b
- 2011a
- 2011b
- 2012a
Discharge of high risk ballast water

![Bar chart showing discharge of ballast water in MMT over years 2010b, 2011a, 2011b, and 2012a. The chart indicates the volume of discharge for different categories such as Tank, Bulk, Unmanned Barges**, Container, General, Other, Passenger, and Auto.](image)
Performance Standards

• Treatment technology assessment report
  – In revision
  – Targeting June Commission meeting
• Compliance assessment protocols (Article 4.7)
  – Temporarily on hold
• Shore-based reception and treatment facilities
  – Developing RFP for feasibility study
• Working with Commissioners and stakeholders to develop comprehensive plan for implementation
MISP Biofouling Management Timeline

• 2003 – Marine Invasive Species Act
• 2005 – Workshop and TAG meetings
• 2006 – Legislative Report
• 2006 – Voluntary hull husbandry survey
• 2007 – Assembly Bill 740
  – Hull Husbandry Reporting Form (HHRF)
  – Continue funding biological research
  – Develop regulations by 2012
HHRF Submission Compliance

<table>
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<th>Category</th>
<th>2010</th>
<th>2011</th>
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<td>Unmanned Barge</td>
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</tbody>
</table>
Funded Research

• Moss Landing Marine Laboratories (Dr. Nick Welschmeyer)
  – Plankton bulk viability analysis

• The Glosten Associates
  – Ballast water sampling tool

• Smithsonian Environmental Research Center
  – Biofouling (quantity, quality, extent, parasitism…)

• APL
  – Installation of NEI treatment system on *APL England*
Looking Forward

• Improve compliance – targeted outreach and enforcement
• Performance standards – implementation and compliance assessment
• Shore-based treatment feasibility study
• Hull husbandry data analysis, dissemination
• Biofouling research
• Biofouling regulations
• MOUs with regional/international partners
Questions?

For more information
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