

Recreational and Fishing Vessels as Vectors for Marine Aquatic Invasive Species in California

Current Situation and Management Options

Marina IACC, December 12, 2012

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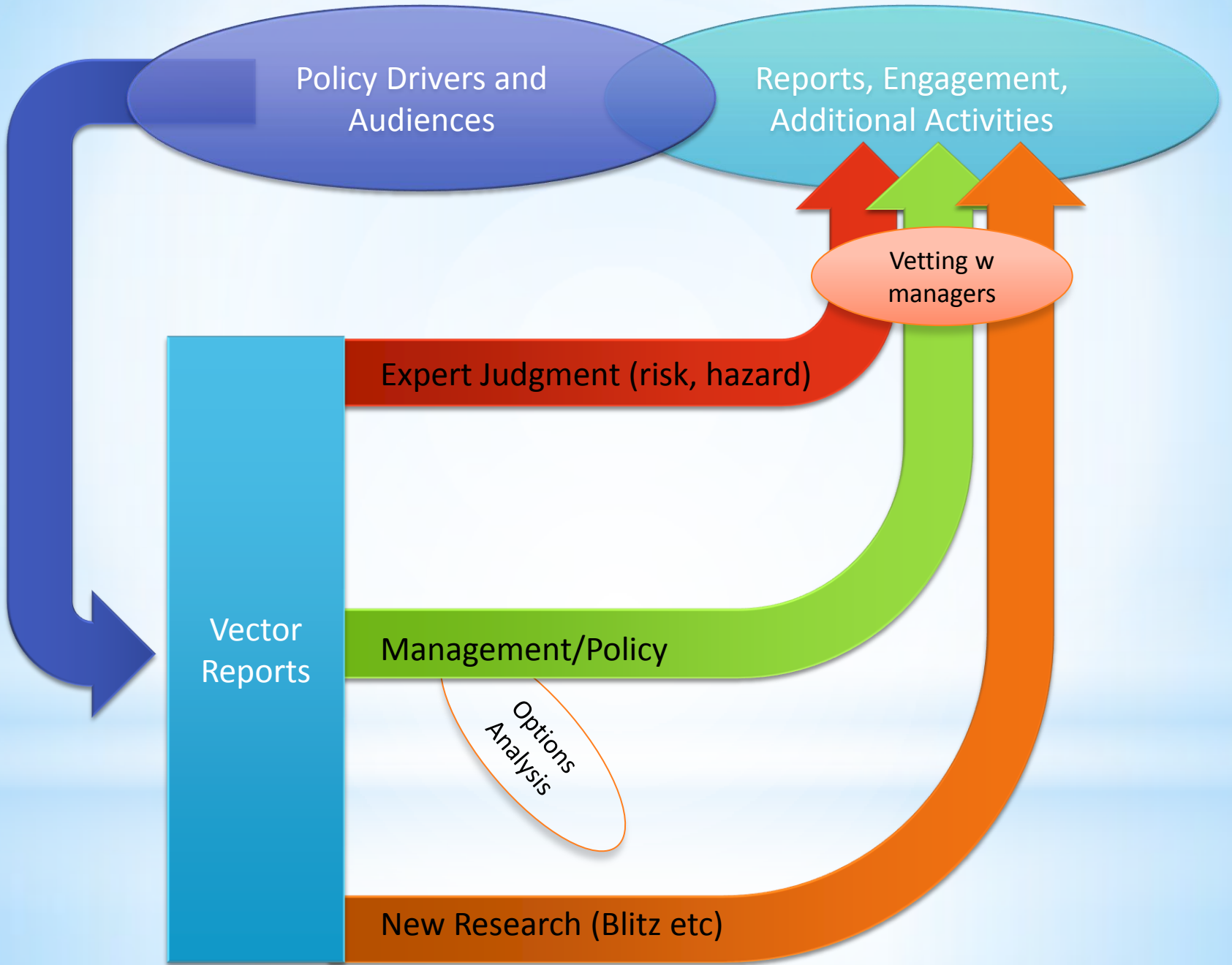
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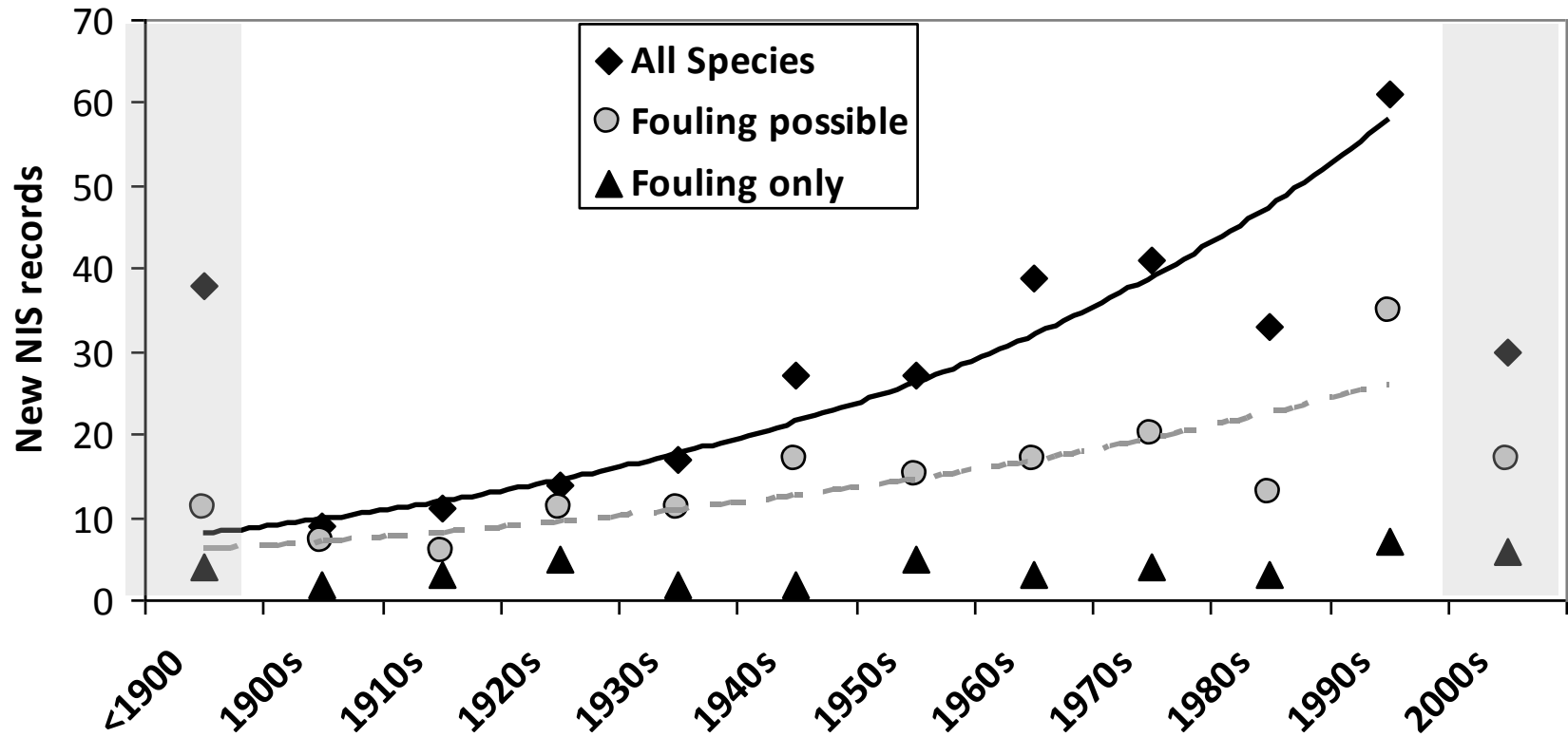
Goals for Today

- Share information on new research about vessels as vectors of Marine NIS
- Introduce draft Management and Policy Options being written to prevent the introduction of NIS into California waters
- Discuss opportunities to provide feedback, continue conversations, or participate in other research or other voluntary data collection

Small vessels as vectors

- Historical introduction patterns
- Contemporary vector activity
- Hull fouling

Historical introduction patterns



Distribution patterns

- Most NIS in bays with multiple vectors:

- Commercial shipping

San Francisco – LA/LB – Humboldt - Hueneme – San Diego

- Aquaculture

San Francisco – Newport – Elkhorn – Tomales – Humboldt – Morro

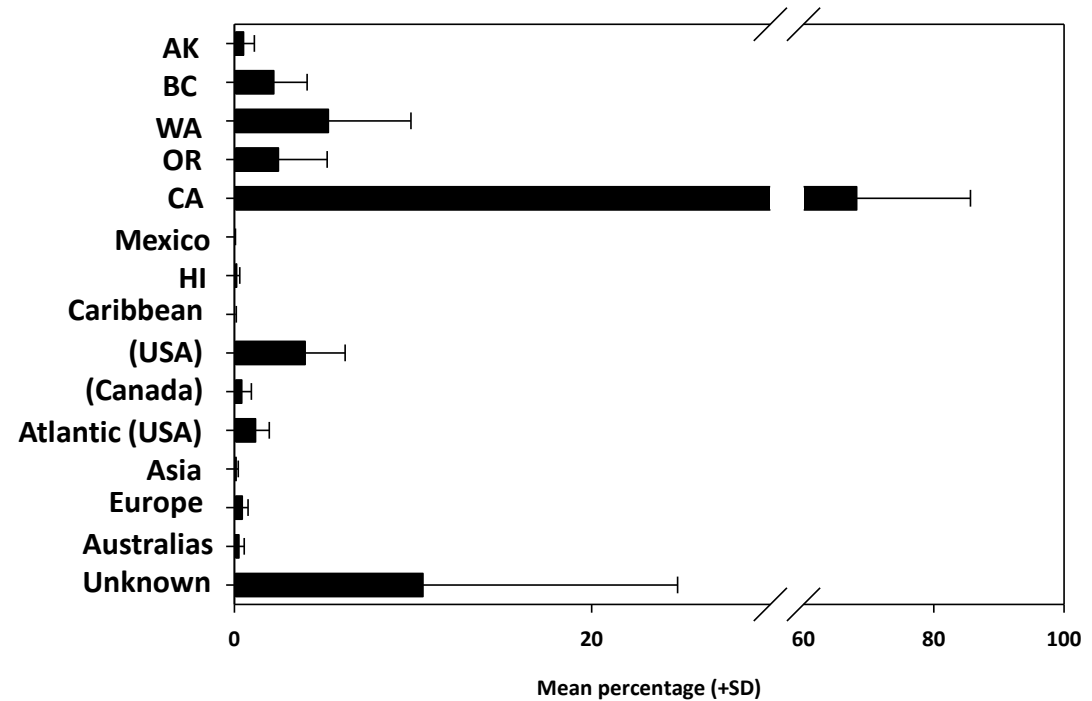
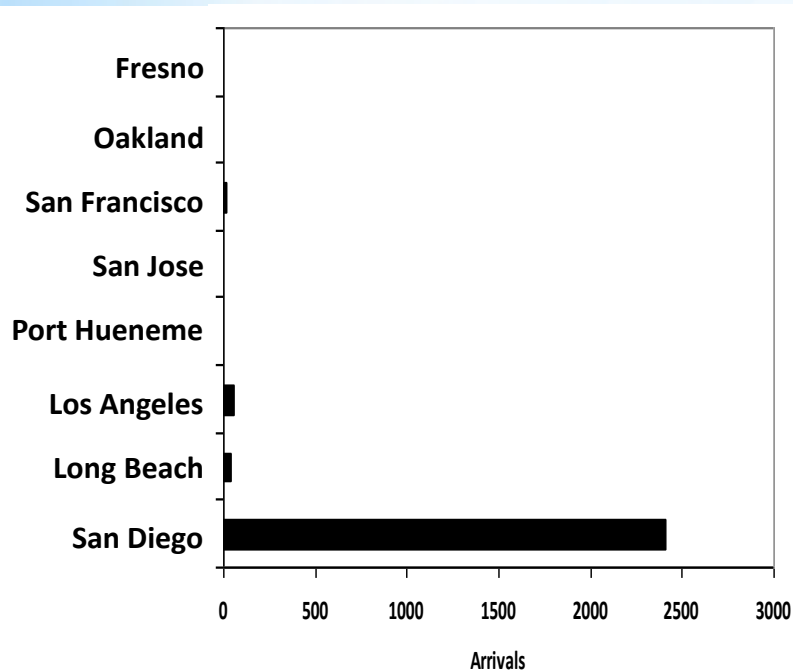
- But, smaller bays without these vectors also have NIS

Mission – Santa Monica – Bodega – Santa Barbara

San Pedro – Marina Del Rey -Monterey

- Highlights importance of small vessels as vectors

Vector activity -transient vessels



Customs & Border Protection

- ~1,000 arrivals annually

Marina records

- Home ports

Vector activity -California vessels

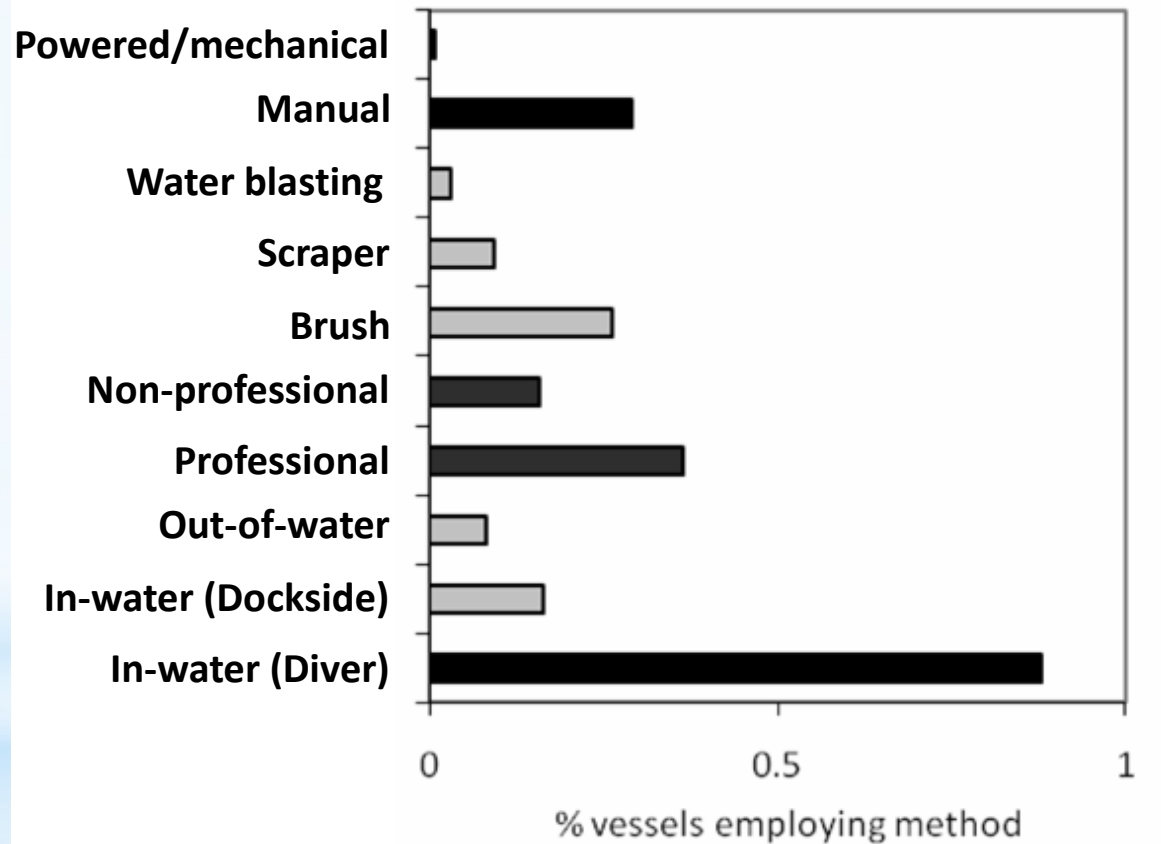
- ~1,000,000 CA registered **small** vessels annually
- 20-50% making out-of-bay voyages

Channel Islands – Mexico – Newport Bay – Half Moon Bay – San Pedro – San Diego

- ~2500 **fishing** vessels arriving to CA (2005-08)
- 50% making out-of-bay voyages
- 19% travel out-of-state

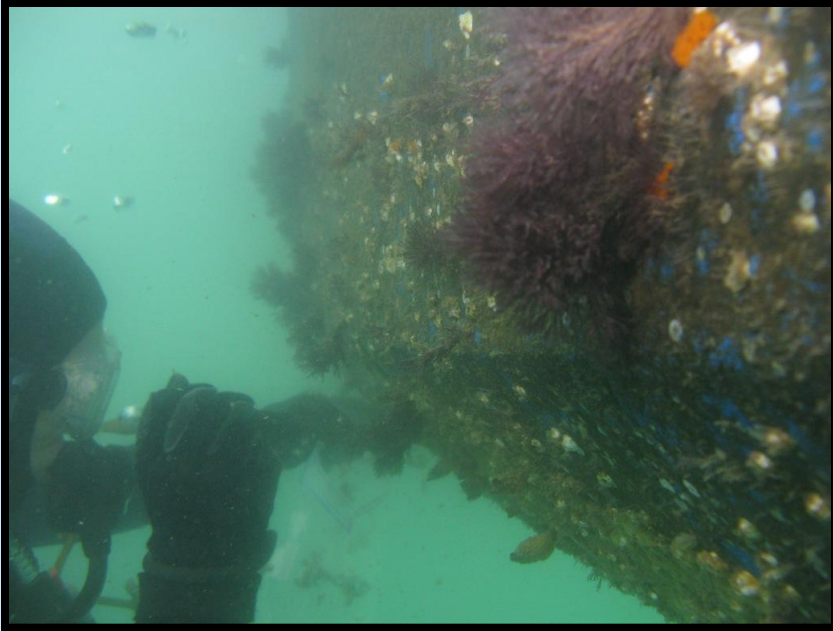
San Pedro – Santa Barbara – San Diego – San Francisco

Vector activity -hull maintenance



- **42%** rec boats maintained within the **past month**
- **87%** within the **past year**

Hull fouling



- **86%** transient rec vessels with hull fouling organisms
- Most had **100s** of fouling organisms
- Including **NIS** (established and novel)
- Importance of “niche” areas

Summary

- Active contemporary vector
- Many opportunities for transport
- Established and novel NIS

Goals for Policy Options

Identify a menu of research, education, and policy options that:

- Recognizes existing resource limitations
- Complement each other
- Target high-risk vectors or subsets of vectors
- Focuses on prevention of marine NIS

**California
Aquatic Invasive Species
Management Plan**

State of California
Resources Agency
Department of Fish and Game
January 2008

Recreational Vessels

Information and Research Needs

- Fund cost-benefit studies for hull cleaning and timing

Education and Outreach

- Add an NIS component to Dockwalkers Program

Policy and Management

- Issue in-water hull cleaning permits to hull cleaning businesses that adopt best management practices

Fishing Vessels

Information and Research Needs

- Collect information about hull husbandry practices on commercial fishing vessels

Education and Outreach

- Provide information on hull husbandry best practices with fishing licenses

Policy and Management

- Inspect transient fishing vessels arriving from high risk areas

How to Participate

- Provide feedback on draft management and policy options
- Voluntary implementation of finalized options
- Connect with researchers to facilitate or participate data collection
- Most importantly reach out to us!

Contact Us

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