

Marine Shipping Update

**Board of Directors
Santa Barbara County
Air Pollution Control
District**

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Marine Sanctuary**



Overview

- Background
 - Shipping emissions and Santa Barbara County
 - Vessel Speed Reduction Trial Program 2014
- What's New
 - Marine Shipping Working Group 2015-2016
 - Second VSR Program in Planning Stages
 - **\$100,000 in Funding** from National Marine Sanctuary Foundation

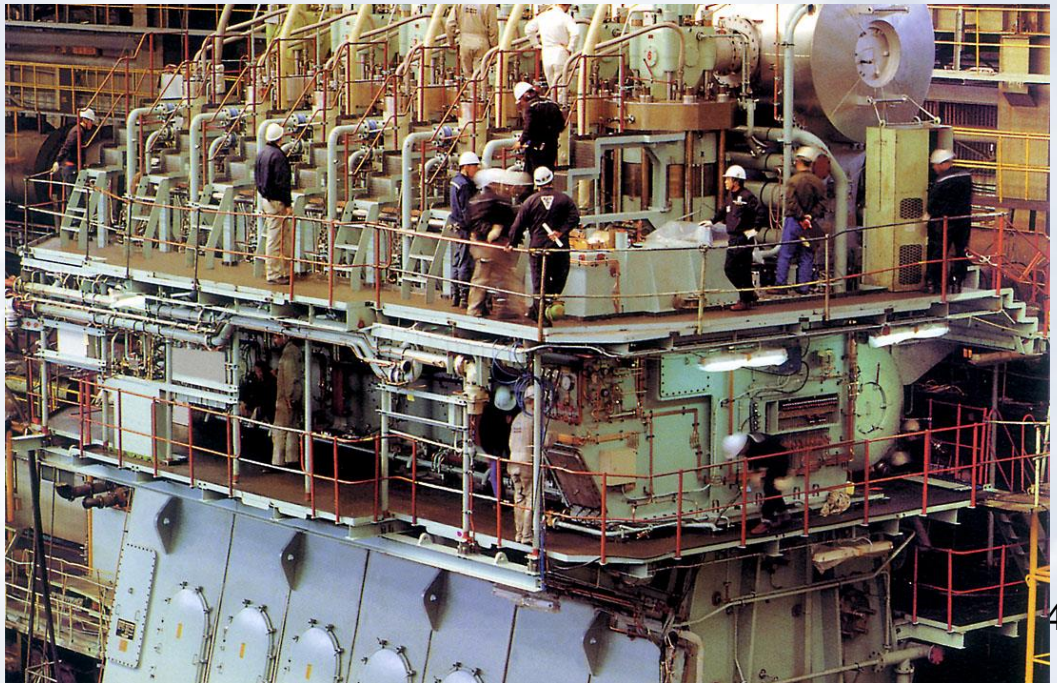
Background

- Shipping
 - Major source of air pollutants, including NO_x
 - We need NO_x reductions to achieve ozone standards
 - We have achieved significant NO_x reductions from onshore sources



Background

- International rules for ships
 - significant reductions in particulate, sulfur, air toxics
 - NOx reductions only over long term with fleet turnover to new engines



Vessel Speed Reduction (VSR) Strategy

- Near-term NOx reductions
- Whale-protection benefits offer opportunities for partnerships and funding
- Whale season and ozone season coincide
April – October



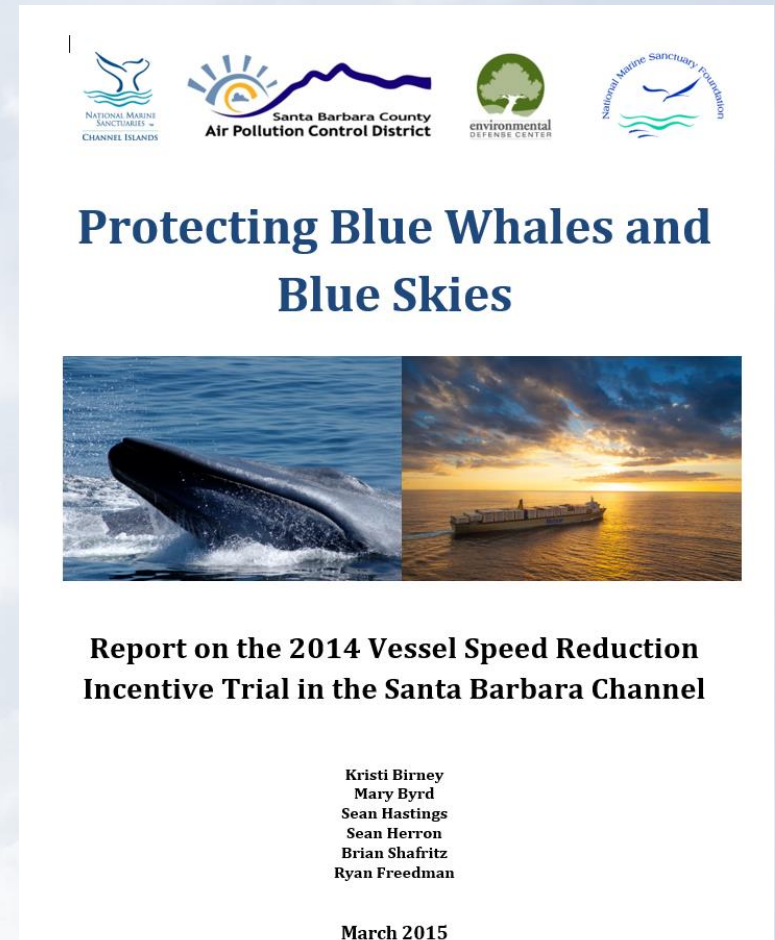
VSR Trial July-November 2014

- Modeled after successful programs at the Ports of LA/LB
- 27 ships qualified for incentive (\$2,500/transit)
34 ships enrolled
 - 6 did not achieve target speed; 1 did not transit the Channel



Trial Results

- Showed that shipping companies will participate
- Slow speeds verified
- 16 tons of NOx emissions reduced
- No documented strikes on whales in Trial period

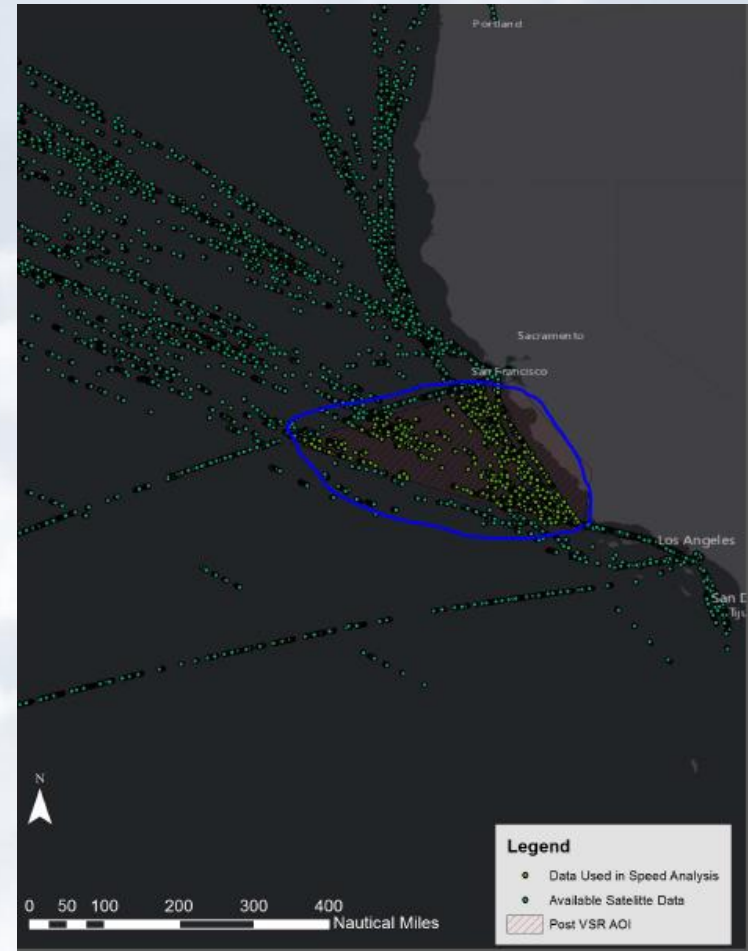


Analysis of Satellite Data

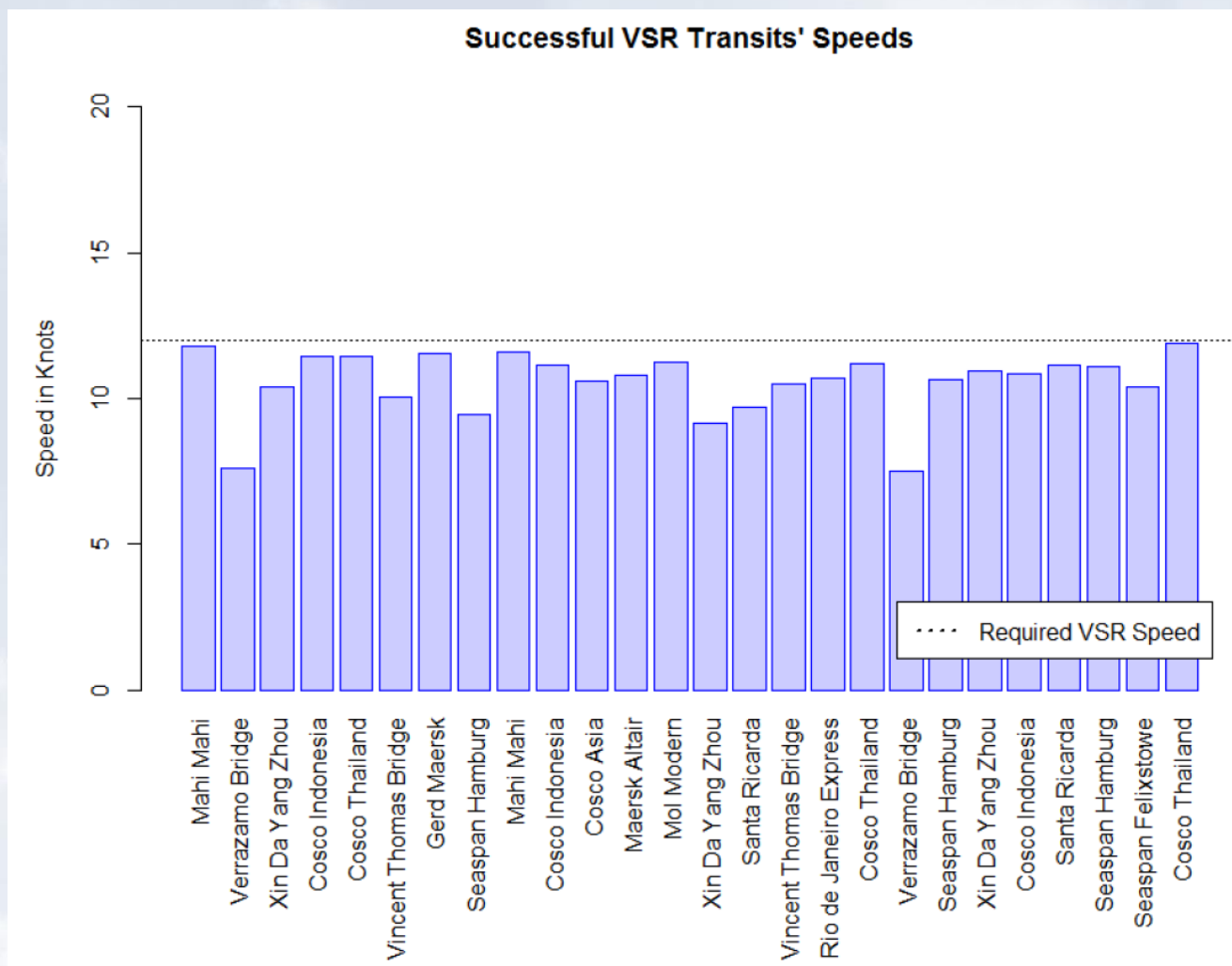
- Goal: assess how much ships sped up outside the VSR Zone
 - Speed up can undermine emission reductions and whale-protection benefits
- Process:
 - Determine average speed for ALL ships in Area of Interest (AOI) leaving VSR Zone
 - **Average is 16.82 knots**
 - Assess whether ships in the VSR Trial went over that average

Satellite Data

- Circled area = Area of Interest (AOI)
- Satellite data points for ship transits (ships enrolled in VSR program, plus ships not enrolled)
- Source: SpaceQuest, Ltd.

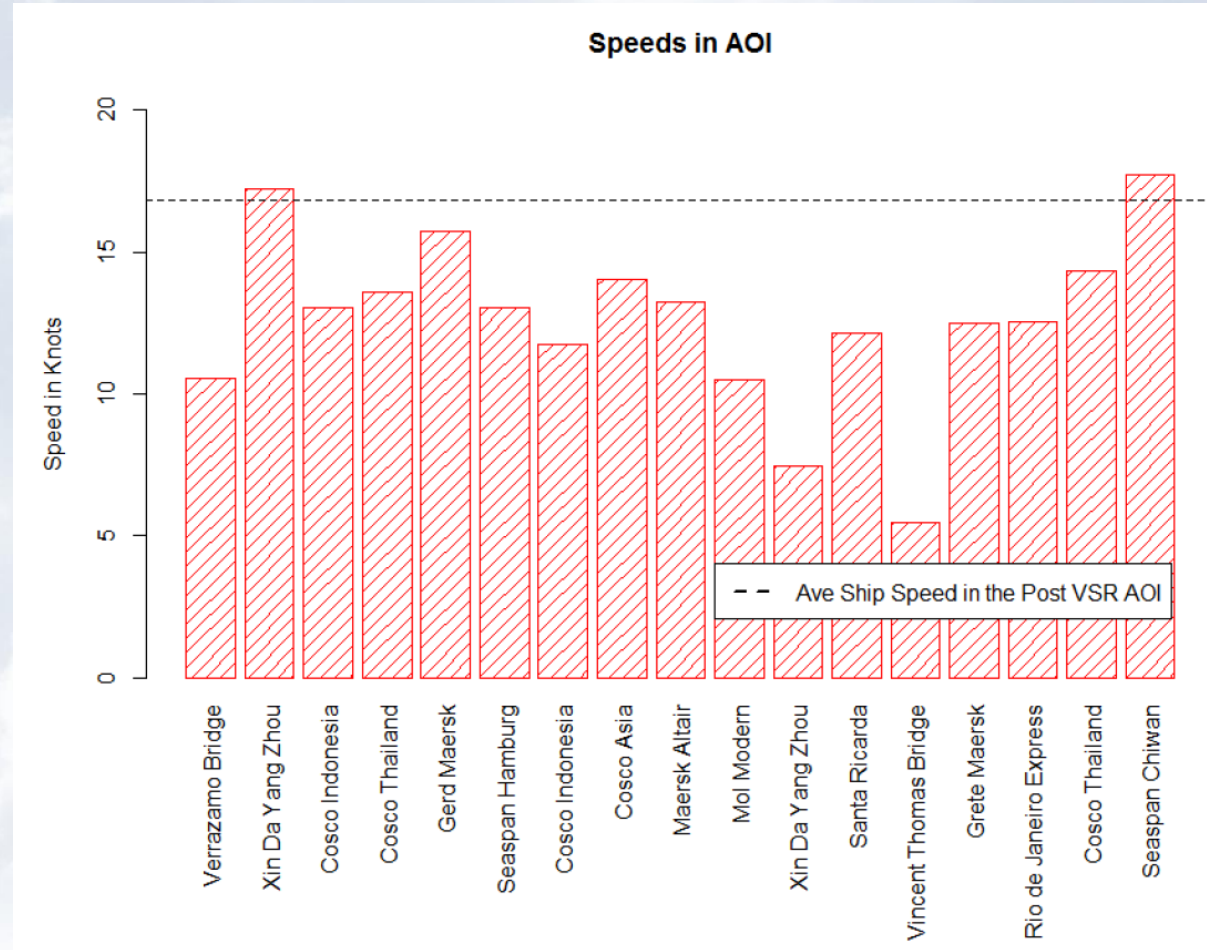


Successful Ship Transits (12 knots or less avg.)



Speeds in Area of Interest (AOI)

- Only 2 ships exceed average for all ships (16.82 knots) in the post VSR Area



2015: Marine Shipping Working Group

- Under Channel Islands National Marine Sanctuary Advisory Council
- Diverse stakeholders, develop recommendations to:
 - Reduce the risk of ship strikes on endangered whales;
 - Decrease air pollution and greenhouse gas emissions;
 - Improve navigational safety and promote efficient maritime shipping throughout the region; and
 - Reduce conflicts among ocean users.

Range of Working Group Ideas

- Expand collection of whale sightings and communicate whale data to shipping industry
- Establish formal ship routes south of the islands, extend current lanes farther west
- Explore use of whale detection technology
- Expand Area To Be Avoided around Sanctuary farther west to protect whale habitat.

Working Group Ideas (cont.)

- Vessel speed reduction options
 - VSR: the only tool that enhances both air-quality and whale-protection benefits
 - VSR Zone extended to all ships in region – south of the islands
 - Voluntary preferred: industry opposed to VSR regulation

Unanimous support for 2nd VSR Incentive Program

Second VSR Program

- Funding partners
 - **New:** National Marine Sanctuary Foundation: \$100,000
 - District: \$50,000
 - The Volgenau Family Foundation (\$15,000)
 - Ventura County APCD (TBD)
- Possible additional parameters



Next Steps

- Details for implementation
- Return to your Board with updated agreement with National Marine Sanctuary Foundation
- Questions?

