Marine Shipping Update

Board of Directors
Santa Barbara County
Air Pollution Control District

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Mary Byrd
Sean Hastings
Ryan Freedman
Channel Islands National Marine Sanctuary

www.OurAir.org
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 NOx
  – We need NOx reductions to achieve ozone standards
  – We have achieved significant NOx 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.)

Source: SpaceQuest, Ltd.
Speeds in Area of Interest (AOI)

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

Source: SpaceQuest, Ltd.
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.
• 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?