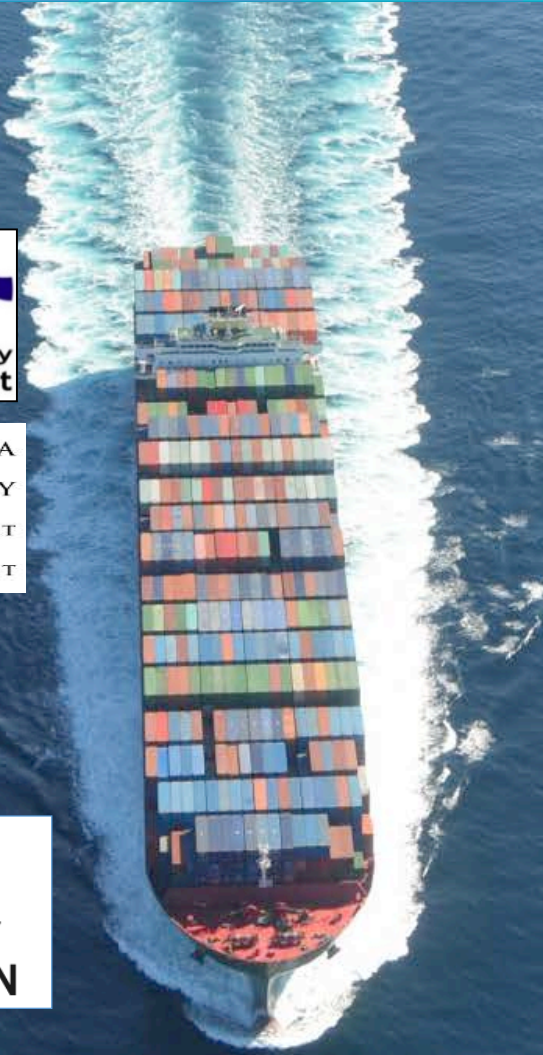




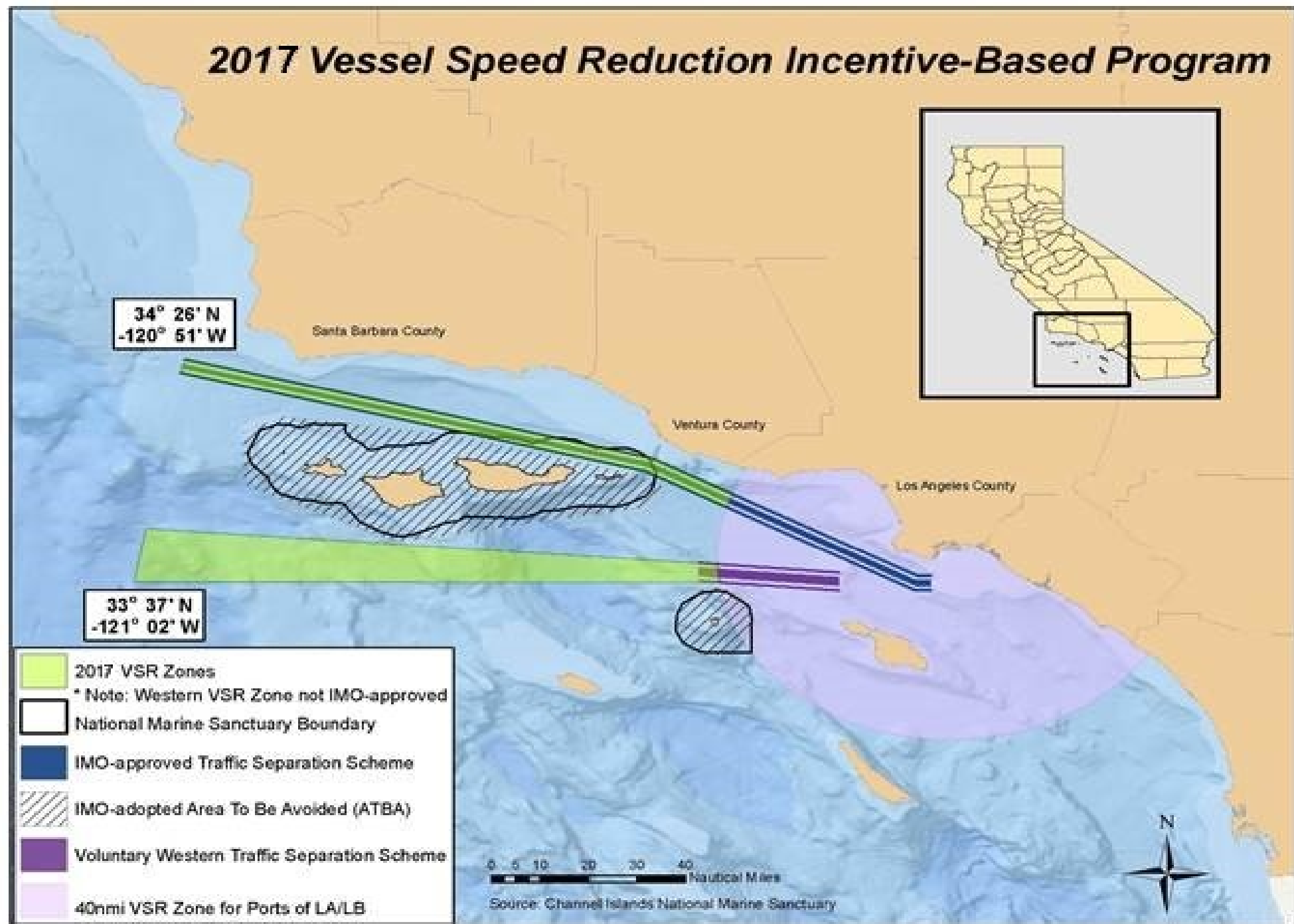
Incentive-Based Vessel Speed Reduction (VSR)



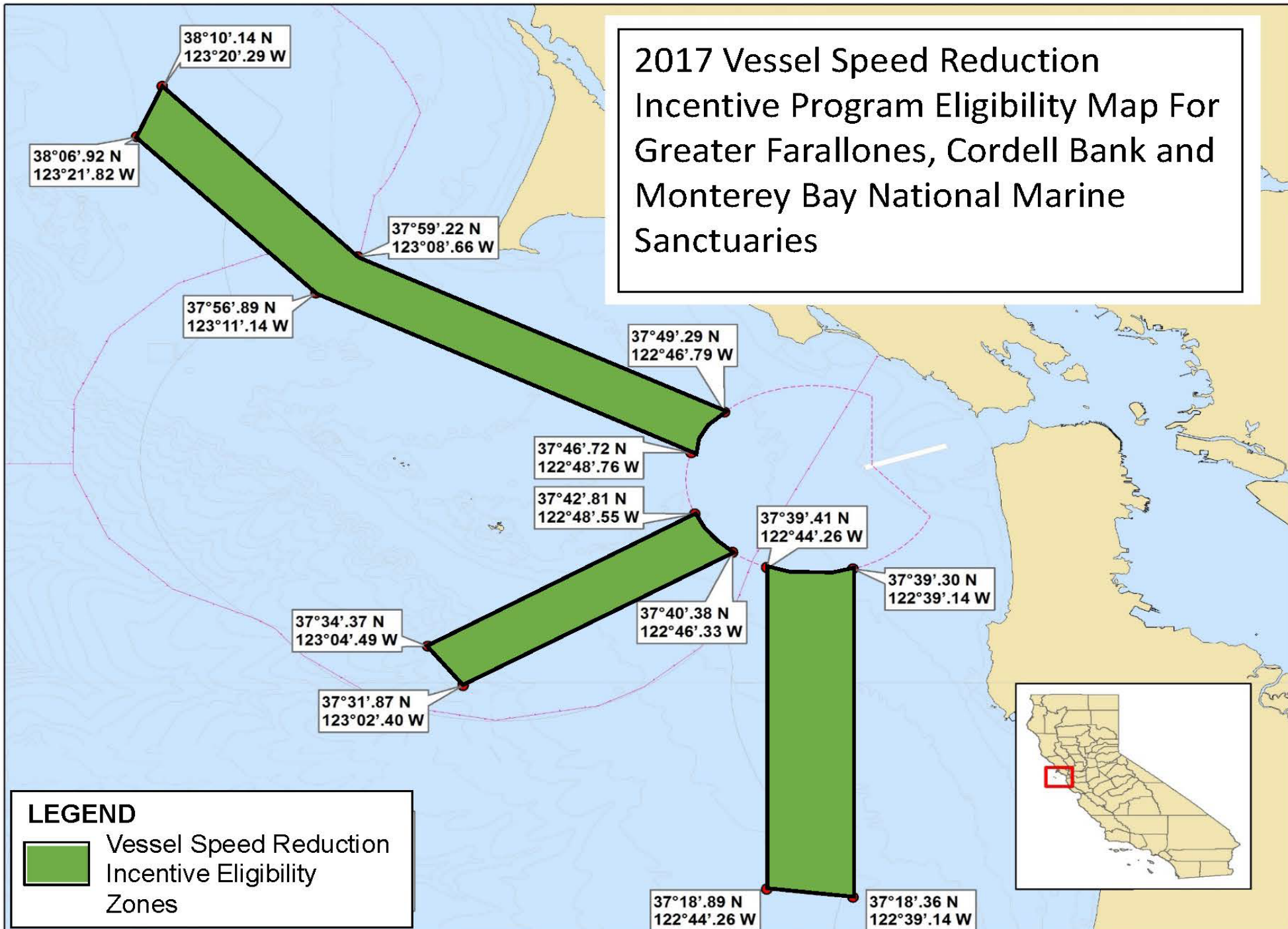
PROGRAM GOALS

- Reduce threat of ship strikes to endangered whales
- Reduce harmful air pollution
- Partner with shipping industry
- Test effectiveness of incentive-based approach

2017 Vessel Speed Reduction Incentive-Based Program



2017 Vessel Speed Reduction Incentive Program Eligibility Map For Greater Farallones, Cordell Bank and Monterey Bay National Marine Sanctuaries



VSR Funding & Incentives



2017 VSR Funders:

- Santa Barbara County Air Pollution Control District
- Ventura County Air Pollution Control District
- Bay Area Air Quality Management District
- Volgenau Foundation
- National Marine Sanctuary Foundation

2017 VSR Funding

TOTAL BUDGET: \$250,000+
Incentives Payments
\$187,600

Incentive Structure – financial and positive public relations

- Slow to ≤ 12 kts -- \$1,000 for 1 way transit per VSR zone
- Slow to ≤ 10 kts -- \$250 bonus for 1 way transit per VSR zone
 - *Example:* Santa Barbara/Bay Area trip: \$2,500 (≤ 10 kts)
- Extensive Positive Public Relations Campaign – print, televised and radio media

2017 VSR Shipping Lines



Matson®



MEDITERRANEAN SHIPPING COMPANY





2017 VSR Results

# of transit applications received	462 (238 were eligible)
# of shipping lines enrolled	11
# of different vessels	44
Total # of transits enrolled	143
% of transits @ 10 knots or less	66



VSR 2017 Emission Reduction Results



- Reduced 83.5 tons of smog-forming nitrogen oxides emissions and 2,630 metric tons of greenhouse gases
- Studying the area in between the VSR Zones
- Of the transits that participated in both VSR regions,
75 percent either slowed down or did not speed up in between
 - 60 percent slowed down in area in between

VSR Programs



2014	2016	2017
Santa Barbara Channel	SB Channel and South of Channel Islands	SB Channel, South of Channel Islands & San Francisco Bay Area
7 Shipping Lines 27 ship transits incentivized	10 Shipping Lines 50 ship transits incentivized	11 Shipping Lines 143 ship transits incentivized
*Emission Reductions: 12.4 tons NOx 500+ metric tons Green House Gases (GHG)	*Emission Reductions: 25.6 tons NOx 1000+ metric tons GHG	*Emission Reductions: 83.5 tons NOx 2,630 metric tons GHG

www.ourair.org/air-pollution-marine-shipping/

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