



## Protecting Blue Whales and Blue Skies

Report on the  
2016 Vessel Speed  
Reduction Incentive  
Program in the  
Santa Barbara  
Channel Region

In 2016, Channel Islands National Marine Sanctuary, Santa Barbara County Air Pollution Control District, Ventura County Air Pollution Control District, National Marine Sanctuary Foundation and Volgenau Foundation implemented a voluntary incentive program to slow ships down in the Santa Barbara Channel region to reduce air pollution and protect endangered whales. The program was in effect July 1 - November 15, 2016, coinciding with peak ozone (smog) and whale season in the region. The 2016 Vessel Speed Reduction (VSR) incentive program followed the successful 2014 VSR Trial program and a 2015 Marine Shipping Working Group under the Channel Islands National Marine Sanctuary Advisory Council, which expressed unanimous support for a second VSR program.

### Highlights of VSR 2016

- Ten global shipping companies participated
- Slowed 50 ship transits to <12 knots (including 14 transits to <10 knots)
- Reductions from baseline emissions for participating vessels of:
  - 25.6 tons of smog-forming nitrogen oxides (NO<sub>x</sub>)
  - More than 1,000 metric tons of regional greenhouse gases
- Slower speeds reduced the risk of fatal ship strikes on whales



## Issue

Each year, thousands of large container ships going to and from the Ports of Los Angeles and Long Beach travel either around the Channel Islands or through designated shipping lanes in the Santa Barbara Channel.

### ***Air emissions***

In Ventura and Santa Barbara counties, these vessels are a significant source of:

- smog-forming nitrogen oxides
- sulfur dioxide
- greenhouse gases
- diesel particulate matter
- other toxic air pollutants hazardous to human health

### ***Fatal Ship Strikes***

At least three endangered whale species feed and travel in and around the Santa Barbara Channel region seasonally:

- Blues, Fins, Humpbacks

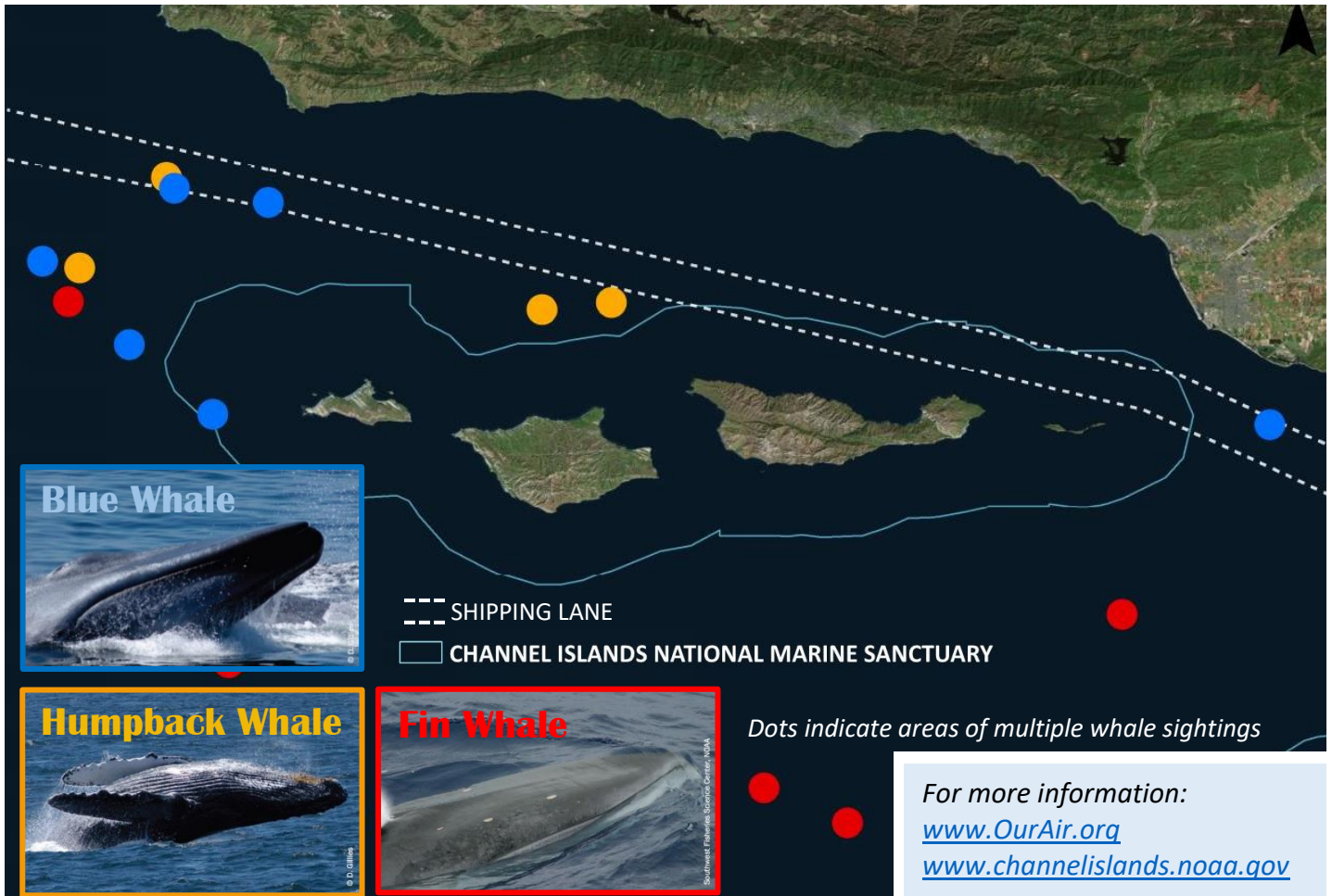


### ***International Shipping Rules***

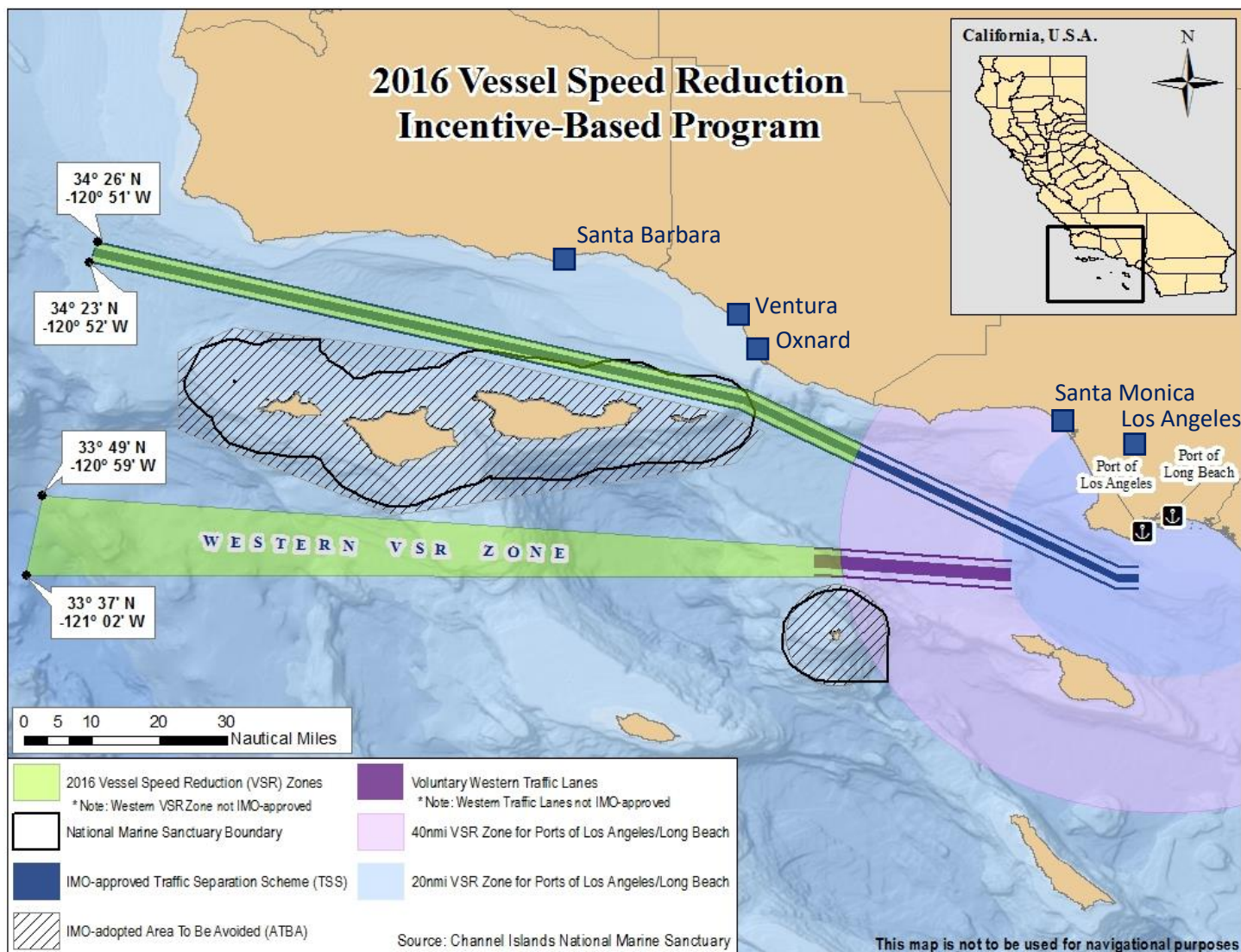
The area up to 200 nautical miles off the coast of North America has been designated by the International Maritime Organization as an Emission Control Area. Ships are required to use lower-sulfur fuel, which greatly reduces emissions of particulates, air toxics and sulfur dioxide, but only achieves small NOx emissions reductions. Significant NOx reductions are not expected until clean-engine requirements for new ships are phased in; this is estimated to occur starting in the 2030s.

### ***Whale Protection Laws***

Blue, Humpback and Fin whales are protected under the Endangered Species Act, Marine Mammal Protection Act, National Marine Sanctuaries Act, and international treaties.







## Goals for the 2016 VSR Program

- Achieve immediate air quality and whale protection benefits
- Engage the shipping industry's participation, including in whale sightings
- Establish a second VSR Zone south of the Islands, and provide additional options, including slowing down to 10 knots
- Refine data and tracking mechanisms; investigate new scales and bonuses
- Lay the foundation for establishing a larger-scale program in the future

## Criteria for 2016 VSR

- Vessel must have a documented speed of 14 knots or higher in previous trips through the Santa Barbara Channel Region
  - Ensures at least 2 knots speed reduced
  - Previous baseline speeds ranged from 14 knots to 20+ knots
- Vessels must be participating in one of the VSR programs at the Ports of Los Angeles & Long Beach
  - Prevents program from competing with Ports programs
  - Ensures a continuous slow-speed zone from Ports through Channel region

## Ten global shipping companies participated:



Count On MOL.



## Program Implementation

The 2016 VSR Program was developed and implemented by staff from the partner agencies and organizations:

- Funding was provided by:
  - Santa Barbara County Air Pollution Control District
  - Ventura County Air Pollution Control District
  - Volgenau Foundation
  - National Marine Sanctuary Foundation
- The National Marine Sanctuary Foundation served as a fiscal agent for receiving funds and making incentive payments.

## National Clean Air Award



*The Protecting Blue Whales Blue Skies partners were recognized in 2016 with a National Clean Air Excellence Award from the U.S. Environmental Protection Agency for the 2014 VSR program, and the 2015 efforts through the Marine Shipping Working Group of the Channel Islands National Marine Sanctuary Advisory Council.*

## Comparison with 2014 Program

2014	2016
27 vessel transits	50 vessel transits
12.4 tons NOx reduced	25.6 tons NOx reduced
500+ metric tons GHG reduced	1,000+ metric tons GHG reduced
Incentive per transit: \$2,500	Average incentive per transit: \$2,100

## Next Steps

The 2016 VSR Program represented a significant advancement over the 2014 Trial and continued to expand on the solid foundation for establishing a larger-scale program.

### Benefits of a Large-Scale Program in the Santa Barbara Channel Region

(Estimated 2,800 transits through region June-November 2016)

- Estimated 1,500 qualify for VSR incentive
- Estimated 825 tons of NOx emissions reductions per season
- Estimated 30,000 metric tons of regional GHG emissions reductions per season
- Immediate emission-reduction and whale-protection benefits

### Benefits of a Large-Scale Program along the California Coast or Whole U.S. West Coast

- Increased emission reduction and whale-protection benefits
- Continuous slow-speed zone – reduces risk of accelerated speeds outside zone

## Urgency

- NOx reductions from international engine rules not expected until 2030s
- New federal ozone standard could put our region out of attainment; more important to reduce NOx emissions
- Projected increase in annual transits through the Channel to the Ports
- Ship strikes are one of the leading causes of whale mortality and may be affecting population recovery

