



air pollution control district  
SANTA BARBARA COUNTY

# VESSEL SPEED REDUCTION INCENTIVE PROGRAM

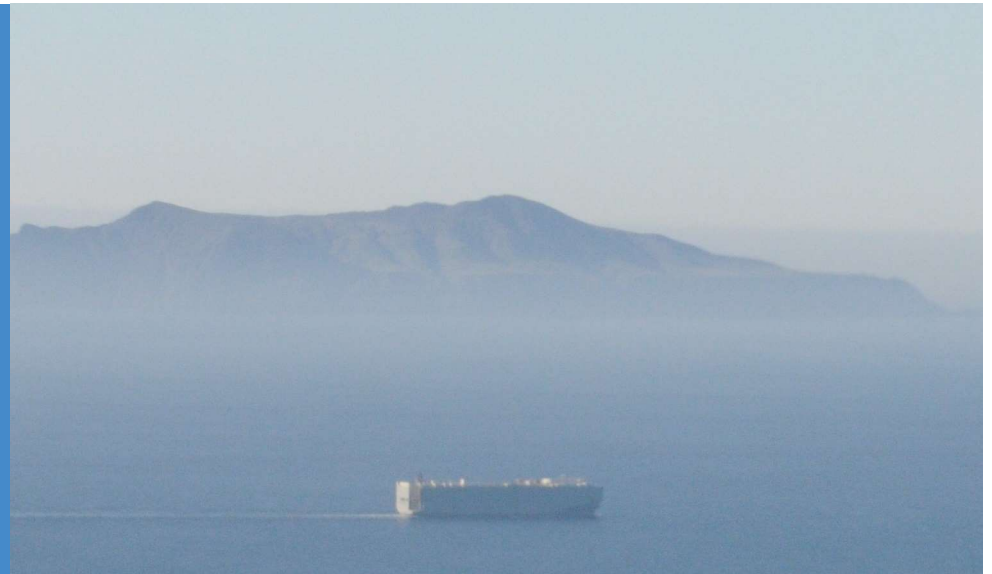
## 2020 PROGRAM RESULTS

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

Our Mission: To protect the people and the environment  
of Santa Barbara County from the effects of air pollution.

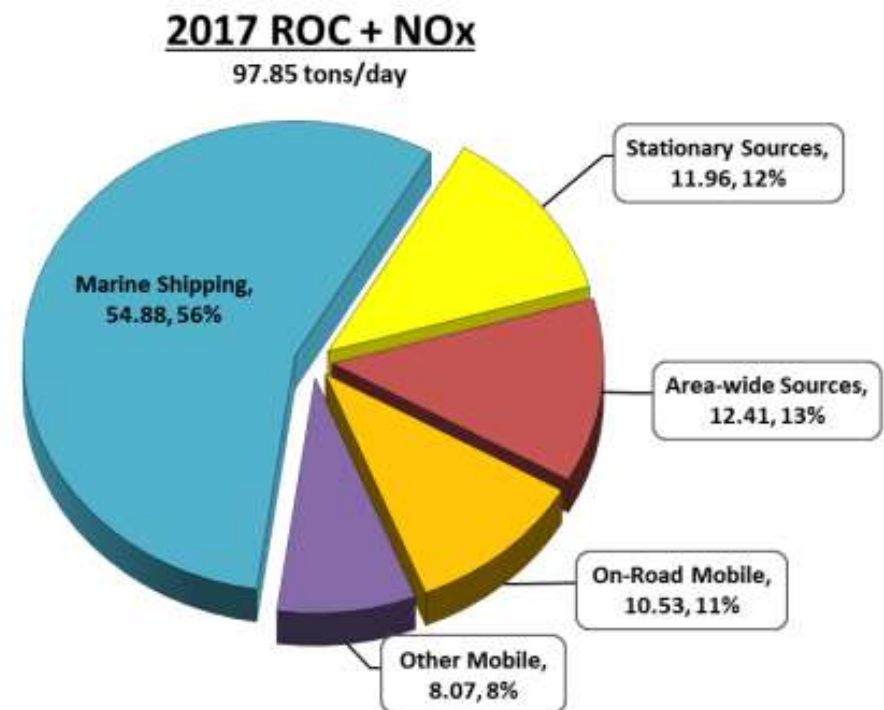
Aeron Arlin Genet  
Director / APCO

Molly Pearson/Planning Division Manager  
May 20, 2021



# BACKGROUND

- Offshore emissions = onshore impacts
- Over 100 miles of coastline in Santa Barbara County
- 2019 Ozone Plan
  - Emission inventory for Marine Shipping
  - Commitment to pursue VSR
- Near-term NO<sub>x</sub> reductions
  - Federal and International Maritime Organization (IMO) actions on engine requirements will take a long time
  - Air districts are required to plan to meet federal and state ozone standards



(Source: 2019 Ozone Plan, Fig. 3-2)



**Ventura County  
Air Pollution  
Control District**



air pollution control district  
SANTA BARBARA COUNTY



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT



NATIONAL MARINE  
SANCTUARIES



CALIFORNIA MARINE  
SANCTUARY FOUNDATION



**National  
Marine Sanctuary  
Foundation**



GREATER  
FARALLONES  
ASSOCIATION



# A PARTNERSHIP FOR CLEANER AIR, SAFER WHALES, AND A QUIETER OCEAN

- 2014 pilot in Santa Barbara Channel, expanded each year 2016-2020
- Financial & recognition incentives to shipping companies to slow down in VSR zones
- Container and car carrier vessels
- Seasonal (May to November) to coincide with high ozone levels and presence of whales
- Benefits:
  - Significant emission reductions (NO<sub>x</sub>, GHGs, PM, air toxics)
  - Reduce fatal ship strikes on whales
  - Reduce ocean noise

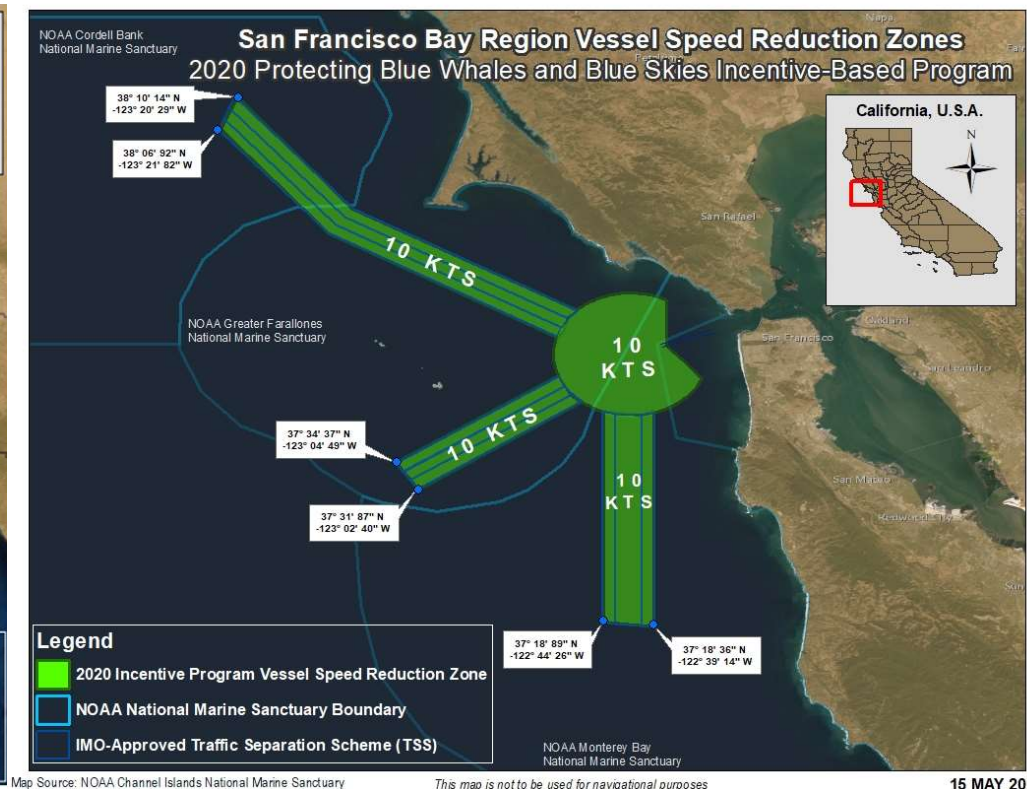
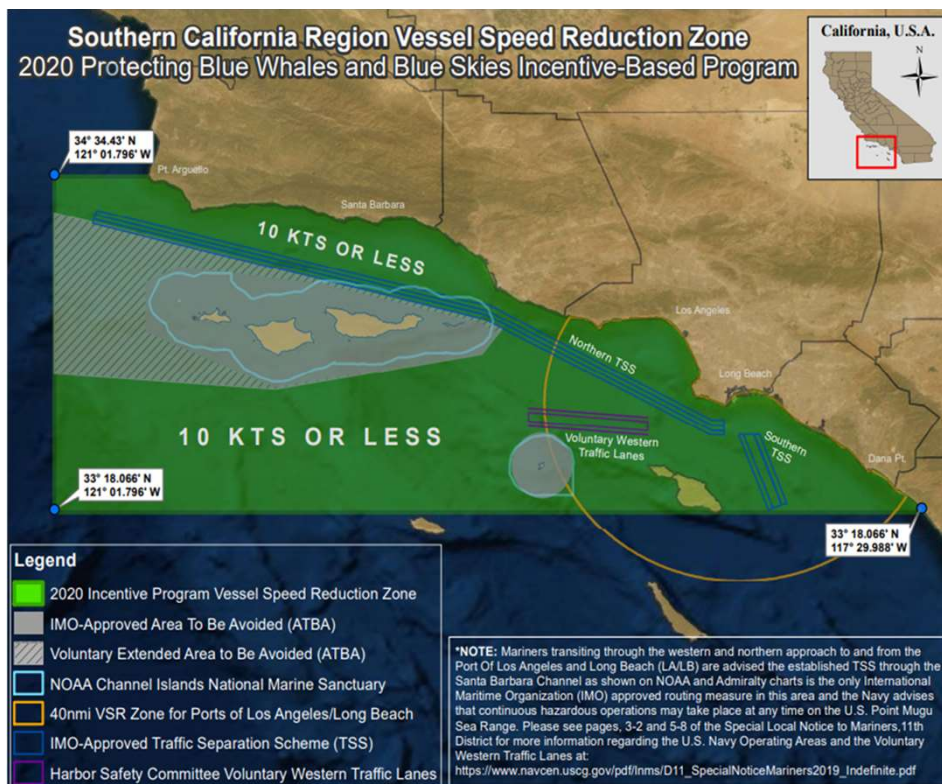


Year	2014	2016	2017	2018	2019	2020
VSR Zone	Santa Barbara Channel	Santa Barbara Channel Region	Santa Barbara Channel Region & San Francisco Bay Area			SoCal Region & SF Bay Area
# Companies	7	10	11	12	15	16
# Vessels	14	25	44	280	349	483
Slow-speed Distance (nautical miles)	2,700	5,000	12,630	46,026	99,019	181,306
NOx Reductions (tons)	12.4	25.6	84	266	536	713*
GHG reductions (metric tons)	535	1,005	2,630	8,668	17,026	23,016*

*\*Initial estimates; may change.*



# 2020 PROGRAM - VSR ZONES



# 2020 PROGRAM - CRITERIA

- Vessels voluntarily travel at 10 knots or less
- Over \$200,000 in funding for awards and recognition
- Financial awards ranged from \$2,000 to \$30,000

## Recognition levels

tiered based on % of distance traveled at 10 knots or less

<b>Sapphire</b>	75-100%
<b>Gold</b>	50-74%
<b>Blue Sky</b>	25-49%

# RESULTS

Company	Cooperation Rate
Swire Shipping	95%
MSC	89%
Hapag-Lloyd	89%
Yang Ming	77%
Mol ACE	76%
NYK-RoRo	74%
Wallenius	74%
Cosco	66%
GALI	67%
K Line	65%
Maersk	62%
CMA CGM	60%
Hyundai Glovis	59%
Evergreen	50%
ONE	31%

Sapphire Award (75 - 100%)	
 <small>MEDITERRANEAN SHIPPING COMPANY</small>	 <b>Hapag-Lloyd</b>
 <small>MOL ACE Auto Carrier Express</small>	 <b>YANG MING</b>
	 <b>SWIRE SHIPPING</b>
Gold Award (50 - 74%)	
 <b>EVERGREEN</b>	 <b>MAERSK LINE</b>
	 <b>Wallenius Wilhelmsen</b>
	 <b>NYK LINE</b> <small>NIPPON YUSEN KAISHA</small>
	 <b>HYUNDAI GLOVIS</b>
	 <b>K LINE</b> <small>KAWASAKI KISEN KAISHA LTD.</small>
Blue Sky Award (25 - 49%)	
 <b>ONE</b> <small>OCEAN NETWORK EXPRESS</small>	



# 2020 PROGRAM - WHALE BENEFITS



## Fatal ship strike risk

35% reduction, combined for both the SF Bay Area and Southern California VSR zones

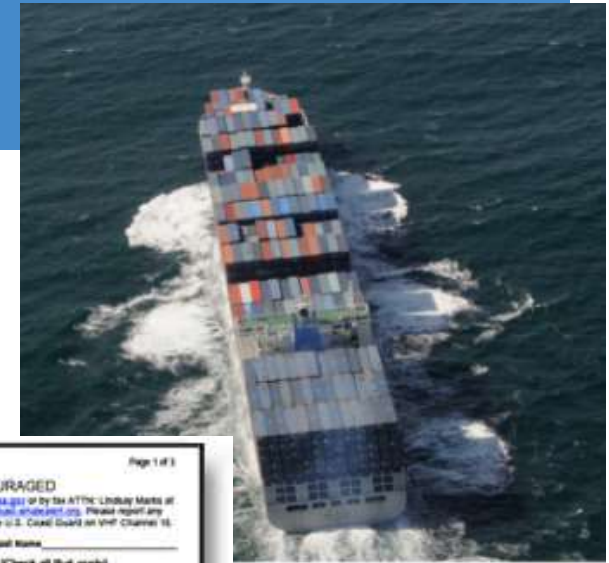


**Ocean Noise**  
4 decibel reduction



# 2021 PROGRAM

- Launched May 15, 2021, similar to 2020 program
- Over \$300,000 of incentive funds
- Funded through a CARB Supplemental Environmental Project (SEP)
  - Managed by Ventura County APCD
  - District receives compensation for staff time
- SEP also provides funding for 2022 program



Attachment 3 of 2019 Vessel Speed Reduction Program Page 1 of 3

**Whale Sightings Report by Transit – HIGHLY ENCOURAGED**

If you see whales, please e-mail this completed report and any photographs by e-mail to [whale@venturaapcd.com](mailto:whale@venturaapcd.com) or by fax ATTN: Lindsay Marks at 805-653-6433. You can also report whales through WhaleAlert, a free application available at <http://www.whale-alert.org>. Please report any sightings with whales or any observed injured or dead whales to NOAA at [whale.marks@noaa.gov](mailto:whale.marks@noaa.gov) or to the U.S. Coast Guard on VHF Channel 16.

Ship Name \_\_\_\_\_ Observer's First Name \_\_\_\_\_ Observer's Last Name \_\_\_\_\_

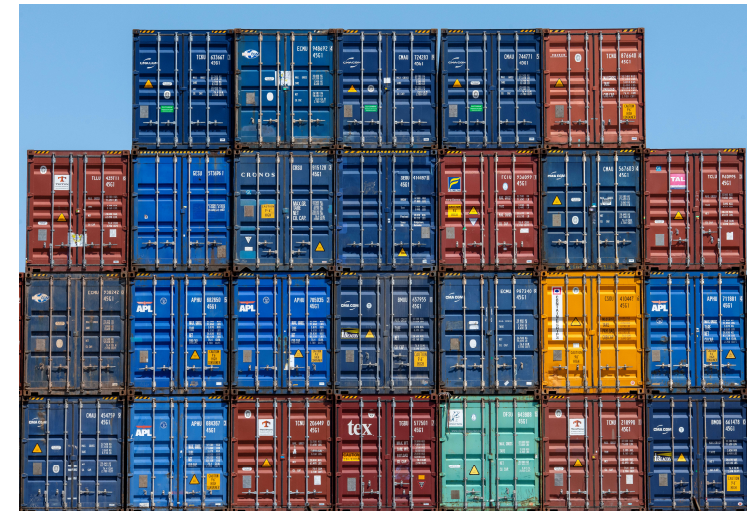
Were any whales seen during the transit? YES ☐ NO ☐ What did you see? (Check all that apply)

<input type="checkbox"/> BLUE WHALE	<input type="checkbox"/> HUMPBACK WHALE	<input type="checkbox"/> FIN WHALE
		
		
<input type="checkbox"/> UNKNOWN WHALE SPECIES		

Date: \_\_\_\_\_

# INTERAGENCY WORK

- **South Coast Air Quality Management District  
2022 Air Quality Management Plan (AQMP)**
  - Several meetings; April 1, 2021 presentation at Mobile Source Working Group for Ocean-Going Vessels
  - Ensure that emission reductions from program are quantified and modeled
- **California Air Resources Board**
  - Ocean-Going Vessel emissions estimate model - include updated vessel speed trends
  - Draft 2020 Mobile Source Strategy – potential measures:
    - Short term: require cleaner vessels visiting ports
    - Longer term: stricter federal and international engine emission standards



# CONTACT INFORMATION

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**Project website:**  
[www.ourair.org/air-pollution-marine-shipping](http://www.ourair.org/air-pollution-marine-shipping)



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