2019 PROGRAM SUMMARY

To cut air pollution and protect endangered whales, the partners continued to expand the voluntary Vessel Speed Reduction (VSR) incentive program for the Santa Barbara Channel Region and the San Francisco Bay Area in 2019. The fifth season of VSR ran May 15-November 15, 2019, coinciding with peak ozone (smog) and whale feeding and migration seasons in these highly trafficked zones off of the California coast.

The program is a joint effort by Santa Barbara County Air Pollution Control District, Ventura County Air Pollution Control District, and Bay Area Air Quality Management District partnering with the National Oceanographic and Atmospheric Administration’s (NOAA) Channel Islands, Cordell Bank and Greater Farallones National Marine Sanctuaries, the California Marine Sanctuary Foundation, and the Volgenau Foundation.

PARTNERS
AIR EMISSIONS

Each year, hundreds of large ships going to and from the Ports of Los Angeles, Long Beach, Hueneme, and Oakland travel through the Santa Barbara Channel, around the Channel Islands, and through the shipping lanes near the entrance to the San Francisco Bay. In coastal communities, these vessels are a significant source of:

- smog-forming nitrogen oxides (NOx),
- greenhouse gases (GHG),
- sulfur dioxide,
- particulate matter, and
- other toxic air pollutants.

Many of the areas affected by these emissions do not meet state and/or federal air quality standards.

CLIMATE CHANGE

Reducing vessel speeds has immediate, near-term benefits in cutting air emissions and protecting whales and it also offers long-term benefits in decreasing the marine sector’s carbon footprint. The International Maritime Organization (IMO) aims to reduce GHG emissions in the shipping industry by at least 50% by 2050.

ENDANGERED WHALE PROTECTION

Endangered Blue, Humpback, and Fin whales feed and travel in and around national marine sanctuaries. NOAA has identified ship strikes as a leading cause of death; reducing these mortalities is a major priority of NOAA’s. Documented deaths totaled 48 whales from 2007-2019, and likely represent only a small fraction of the total number of ship strikes annually. These whales are protected under the Endangered Species Act, Marine Mammal Protection Act, National Marine Sanctuaries Act, and international treaties.

OCEAN NOISE

Whales use sound to communicate, navigate, and forage. Noise pollution from commercial shipping has increased due to increases in number, horsepower, and speed of vessels. Fleets in the Sapphire and Gold award tiers had noise source levels that were approximately 6 (decibels) dB less than fleets that did not slow their speeds. With a reduction in noise pollution emitted, whales can likely communicate easier throughout the Santa Barbara Channel.
2019 VSR RESULTS

GOALS

- Achieve immediate air quality and whale protection benefits.
- Engage the shipping industry to increase participation and cooperation.
- Recognize companies with financial and positive public relations incentives.

CRITERIA

- Vessels must slow down to 10 knots or less.
- Only container ships and auto carriers qualify for incentives, as these are typically the fastest ships in the region.
- The program uses a fleet-based approach, where each company’s entire fleet was asked to slow down to 10 knots or less.

PROGRAM GROWTH

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Santa Barbara Channel</td>
<td>SB Channel Region</td>
<td>SB Channel Region &amp; San Francisco Bay Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companies</td>
<td>7</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Vessels</td>
<td>14</td>
<td>25</td>
<td>44</td>
<td>280</td>
<td>349</td>
</tr>
<tr>
<td>Slow Speed Distance (nautical miles)</td>
<td>2,700</td>
<td>5,000</td>
<td>12,630</td>
<td>46,026</td>
<td>99,019</td>
</tr>
<tr>
<td>NOx Reductions (tons)</td>
<td>12.4</td>
<td>25.6</td>
<td>84</td>
<td>266</td>
<td>536</td>
</tr>
<tr>
<td>GHG Reductions (metric tons)</td>
<td>535</td>
<td>1,005</td>
<td>2,630</td>
<td>8,668</td>
<td>17,026</td>
</tr>
</tbody>
</table>
PARTICIPATING COMPANIES

2019 HIGHLIGHTS

- 15 global shipping companies participated.
- The program uses a fleet-based approach, where each company’s entire fleet was asked to slow down to 10 knots or less.
- 349 vessels slowed down, reducing the risk of fatal ship strikes on whales and the amount of fuel burned.
- Reducing vessel speeds down to 10 knots reduces the likelihood of a fatal strike on whales by 50%.
- Reductions from baseline emissions consisted of:
  - 536 tons of smog-forming nitrogen oxides (NOx), and
  - More than 17,000 metric tons of regional greenhouse gases.

FLEET COOPERATION & AWARDS

Awards and recognition are based on the percentage of total nautical miles traveled at 10 knots or less by each company’s fleet of vessels.

**Sapphire Tier (75-100%)**

- Polynesian Line
- MSC
- Hapag-Lloyd

**Gold Tier (50-74%)**

- PIL
- CMA CGM
- K Line
- NYK Line
- Evergreen
- Maersk Line
- Cosco Shipping

**Silver Tier (25-49%)**

- Hyundai Glovis
- Yang Ming

**Bronze Tier (10-24%)**

- Matson
- ONE
NEXT STEPS

OCEAN RESILIENCY ACT, SB 69 (2019-2020)

Introduced in January 2019, this draft legislation by state Senator Scott Weiner (CA Senate District 11) is a comprehensive bill that focuses on water protection. It also directs the California Air Resources Board, in coordination with affected coastal air districts and national marine sanctuaries, to develop a voluntary VSR program in the Santa Barbara Channel and San Francisco Bay regions. The partners are tracking this bill as it can provide additional resources for future programs.

INVESTING IN THE FUTURE

We wish to thank the following companies for generously declining their 2019 financial incentives. With increased shipping industry cooperation we are confident the 2020 VSR program will be an even bigger success!

2020 VSR PROGRAM LAUNCHED MAY 15

For more information, please see: www.OurAir.org/air-pollution-marine-shipping.